

## SUBCHAPTER 2.2

### BIOLOGICAL RESOURCES

## 2.2 Biological Resources

The following discussion is summarized from the Biological Resources Technical Report for the Proposed Project prepared by HELIX (2009). The complete report is included as Appendix D of this EIR.

### 2.2.1 Existing Conditions

The site supports predominantly native vegetation but contains several dirt roads and trails. Avocados historically have been grown on the northeast portion of the site, while olive production may have occurred on the southern portion of the site. The roads and trails within the Proposed Project site are used by neighboring equestrians and bicyclists.

The following biological resources surveys were performed on the site: vegetation mapping, general botanical and zoological surveys, and a jurisdictional delineation on March 13, 2002; rare plant surveys on March 13, 2002 and May 13, 2003; and coastal California gnatcatcher (*Poliophtila californica californica*) surveys in March 2002, June/July 2003 and March 2009. On February 18, 2009, vegetation mapping was revised for the site, and vegetation mapping and a jurisdictional delineation were conducted for the Cleveland Trail emergency access alignment. Biological resources along Cleveland Trail were updated on June 4, 2009. Vegetation mapping in the vicinity of the Buena Creek Road/Sugarbush Drive intersection was conducted on August 13, 2009. Improvements to off-site intersections proposed as traffic mitigation would occur entirely within previous disturbed areas; therefore, these areas were not surveyed.

#### 2.2.1.1 Existing Setting

##### Vegetation Communities

Ten vegetation communities occur on the approximately 115.5-acre Project site, including coast live oak woodland, Diegan coastal sage scrub (including disturbed), coastal sage-chaparral scrub, coyote brush scrub, non-native grassland, eucalyptus woodland, non-native vegetation, disturbed habitat, orchard and developed land. In addition, 13 vegetation communities were mapped off site, including southern coast live oak riparian forest, freshwater marsh, coast live oak woodland, Diegan coastal sage scrub (including disturbed), coastal sage-chaparral scrub, southern mixed chaparral, non-native grassland, eucalyptus woodland, non-native vegetation, orchard, intensive agriculture, disturbed habitat and developed land. A brief description of each community is provided below. Existing vegetation communities on and off site are illustrated on Figure 2.2-1, Vegetation and Sensitive Resources, and on-site communities also are summarized in Table 2.2-1, On-site Vegetation Communities/Habitats.

##### Southern Coast Live Oak Riparian Forest

Southern coast live oak riparian forest is an open to locally dense evergreen sclerophyllous (a type of vegetation that has hard leaves and short internodes [the distance between leaves along the stem]) riparian woodland that is dominated by coast live oak (*Quercus agrifolia*). This community, which may reach a height between 35 and 80 feet, generally occurs on fine-grained alluvial soils on the floodplains along large streams in the canyons and valleys of coastal southern California (Holland 1986). Although no southern coast live oak riparian forest occurs on site, a patch was mapped adjacent to the off-site Cleveland Trail improvement area. This area is characterized primarily by coast live oak and Mexican fan palm (*Washingtonia robusta*). Understory areas directly along Buena Creek are dominated by exotic components such as castor bean (*Ricinus communis*), ivy (*Hedera* sp.), ash (*Fraxinus* sp.) saplings and umbrella sedge (*Cyperus alternifolius*). Most of the riparian forest outside Buena Creek contains a sparse

understory consisting of poison oak, exotic grasses, ornamental cactus (*Opuntia* sp.) and yucca (*Yucca* sp.). The southern coast live oak riparian forest also contains abundant trash, debris and other materials that have been dumped in this area.

#### Freshwater Marsh

Freshwater marsh is typically dominated by perennial, emergent monocots (one of two major groups of flowering plants) that can reach a height of 12 feet, often forming completely closed canopies. This habitat usually occurs on drainages and ponds lacking significant current but permanently flooded by fresh water. Prolonged saturation permits accumulation of deep, peaty soils. Although no freshwater marsh occurs on site, a small area was mapped southwest of the intersection of Buena Creek Road and Cleveland Trail.

#### Coast Live Oak Woodland

Coast live oak woodland is an open to dense evergreen woodland or forest community dominated by coast live oak (*Quercus agrifolia*), which may reach a height of 35 to 80 feet. This community occurs on site primarily in the northern portion of the site along the western stretch of the main drainage as it exits the property on the western side, and as scattered individual trees elsewhere. Additional species within the coast live oak woodland include poison oak (*Toxicodendron diversilobum*), San Diego honeysuckle (*Lonicera subspicata*) and chess species (*Bromus* sp.). Coast live oak woodland covers approximately 1.0 acre of the Project site.

Coast live oaks have broad root systems that generally extend well beyond the tree canopy. Because these roots are considered sensitive to ground disturbance, the County requires that a root zone be mapped beyond the canopy of all areas of coast live oak woodland. Generally, the County assumes that oak roots extend 50 feet beyond the oak canopy; however, this assumption does not account for variation between individual trees. The oak woodland associated with the main drainage in the north-central portion of the site is very sparse and supports mostly immature trees with very small canopies. Although many trees in this area meet the County's trunk diameter requirement for an oak woodland (six inches at breast height), their canopies are small and do not overlap. The root zone for trees in this area is assumed to be proportional to the canopy diameter of each tree. Therefore, a tree with a 50-foot canopy would have a 50-foot root zone mapped beyond its canopy, and a tree with a 30-foot canopy would have a 30-foot root zone mapped beyond its canopy.

#### Diegan Coastal Sage Scrub (including disturbed)

Diegan coastal sage scrub is a vegetation community commonly characterized by drought-adapted subshrubs such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and black sage (*Salvia mellifera*). This habitat community dominates the Project site. Additional species, such as laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*) and fuchsia-flower gooseberry (*Ribes speciosum*), also occur on site. The area of Diegan coastal sage scrub on site can be separated into two areas. The western, flatter area and the ridge in the northern portion of the site support a California sagebrush-dominated sage scrub, whereas the steep slopes of the east and south support laurel sumac and black sage-dominated sage scrub.

Disturbed Diegan coastal sage scrub primarily occurs in the northeastern portion of the site, where adjacent homeowners have cleared vegetation on site to create a fire buffer around their homes and on terraced slopes previously used to grow avocados. This area is characterized by an increased number of non-native grasses and less cover, especially on the north-facing slopes. Native coastal sage scrub species

are recovering within the disturbed areas. Diegan coastal sage scrub, including disturbed areas, covers approximately 91.37<sup>1</sup> acres of the Project site.

#### Coastal Sage-chaparral Scrub

Coastal sage-chaparral scrub is a mixture of hard-leaved chaparral shrubs and drought-deciduous sage scrub species regarded as an ecotone (or transition) between the two vegetation communities. This singular community contains plant species found in both communities, including California sagebrush, California buckwheat, laurel sumac, scrub oak (*Quercus berberidifolia*) and chamise (*Adenostoma fasciculatum*). Coastal sage-chaparral scrub occurs in various north-facing areas throughout the Project site and covers approximately 2.8 acres.

#### Coyote Brush Scrub

Coyote brush scrub is dominated by coyote brush (*Baccharis pilularis*) and typically occurs in low-lying areas. Mexican elderberry (*Sambucus mexicana*) is also found within this habitat on site. Coyote brush scrub covers approximately 0.3 acre of the central portion of the Project site.

#### Southern Mixed Chaparral

Southern mixed chaparral is composed of tall (between 10 and 20 feet), broad-leaved sclerophyllous shrubs that often form nearly impenetrable stands on mesic, rocky north-facing slopes. It generally has a poorly developed understory, but instead may contain a large component of dead plant matter. It is common within San Diego County, and may provide important habitat for wide-ranging species such as mule deer (*Odocoileus hemionus*), mountain lion (*Felis concolor*) and golden eagle (*Aquila chrysaetos*), which have not been observed on site.

#### Non-native Grassland

Non-native grassland is dominated by non-native grass species such as chess species, oat species (*Avena fatua* and *A. barbata*) and ryegrass (*Lolium multiflorum*) but also can contain some native grasses as well as native and non-native forbs (non-woody plants other than grasses, sedges and rushes). Non-native grassland occurs in several places throughout the Project site often adjacent to or within coastal sage scrub. This habitat covers approximately 13.5 acres of the Project site.

#### Eucalyptus Woodland

As its name implies, eucalyptus woodland is dominated by trees of the species within the genus *Eucalyptus*. The understory within well-established groves is usually very sparse due to the closed canopy and the fact that the leaf litter contains chemicals that discourage the growth of other plants. Within the Project site, eucalyptus woodland occurs in two areas (the northwestern and northeastern corners) and covers approximately 0.2 acre.

#### Non-native Vegetation

Non-native vegetation is the name ascribed to cultivated plants that have become naturalized in native habitat areas or that are remnant of previous cultivated land uses. Non-native vegetation on site consists

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<sup>1</sup> These 91.7 acres of Diegan coastal sage scrub include 0.4 acre that was previously impacted by an abutting neighbor during brush clearing activities.

of scattered olive (*Olea europaea*) trees in the southern portion of the site. This habitat type covers approximately 2.0 acres of the Project site.

#### Disturbed Habitat

Disturbed habitat includes cleared lands that provide little to no habitat value to native animal species or contains a preponderance of non-native plant species. Disturbed habitat consists of unpaved roads, areas previously used for beehives on the western portion of the site, and areas where wood clippings have been dumped. Disturbed habitat covers approximately ~~4.1~~3.7 acres of the Project site.

#### Orchard

The canopies of several avocado trees (*Persea americana*) associated with an orchard on the property adjacent to the northwestern site boundary overlap the Project site. Approximately 0.1 acre of orchard occurs on site.

#### Intensive Agriculture

Intensive agriculture includes dairies, nurseries and chicken ranches. In the Project vicinity, a small palm tree nursery is mapped as intensive agriculture just off site to the northeast. No intensive agriculture occurs on site. As they are subject to regular human maintenance, areas mapped as intensive agriculture provide only limited habitat value and are not considered sensitive.

#### Developed

Developed land is where permanent structures and/or pavement have been placed or where maintained landscaping occurs preventing the growth of native vegetation. Within the Project site, developed land includes fire clearing for residential units to the north and a small area of pavement in the west, totaling approximately 0.2 acre.

#### Jurisdictional Areas

All areas with depressions or drainage channels were evaluated for the presence of Waters of the U.S., including jurisdictional wetlands. Within the Project site, jurisdictional areas occur along the main drainage in the north of the site and in the small canyons extending up the hills in the eastern portion of the site. These drainages are illustrated on Figure 2.2-2, Jurisdictional Delineation.

Each area was inspected according to ACOE wetland delineation guidelines. Wetland boundaries of the ACOE were determined using the three criteria (vegetation, hydrology and soils) established for wetland delineations as described within the Wetlands Delineation Manual (Environmental Laboratory 1987). Drainages lacking evidence of wetland hydrology (i.e., inundation for more than five percent of the growing season) were considered Waters of the U.S. ACOE jurisdictional areas on site comprise 0.12 acre of non-wetland Waters of the U.S. Off site, ACOE jurisdictional areas occur along Cleveland Trail near Buena Creek Road. A patch of freshwater marsh is mapped as an ACOE jurisdictional wetland within the study area. Buena Creek is mapped as an ACOE jurisdictional non-wetland Water of the U.S. because, while it is a perennial stream, no hydrophytic vegetation grows within its banks (Figure 2.2-3). The southern coast live oak riparian forest outside of Buena Creek does not support appropriate hydrological characteristics to be considered ACOE jurisdictional.

CDFG jurisdictional areas were determined based on the presence of any one of the three wetland criteria noted under ACOE jurisdiction, above, being present. Approximately 0.80 acre of CDFG jurisdictional

area occurs on site, including 0.62 acre of coast live oak woodland, 0.06 acre of coyote brush scrub along a drainage in the north-central portion of the property, and 0.12 acre of unvegetated streambed. CDFG jurisdictional areas also occur off site immediately north of the panhandle and near the intersection of Cleveland Trail and Buena Creek Road. The southern coast live oak riparian forest and freshwater marsh in the vicinity of Cleveland Trail are mapped as CDFG jurisdictional wetlands. Buena Creek is also a CDFG jurisdictional streambed. The coast live oak woodland situated between Buena Creek and the western panhandle is not CDFG jurisdictional. The location at which the oaks are rooted is adjacent to the existing road and is substantially above the level of the nearby drainage. Additionally, no evidence of aboveground flows in this area was detected during the jurisdictional delineation.

The County RPO considers wetlands and wetland buffers to be sensitive habitats and regulates potential impacts to them. The County RPO includes protections for wetlands meeting one of the three following attributes: (1) at least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places); (2) the substratum is predominantly undrained hydric soil; or (3) the substratum is non-soil and is saturated with water or covered by water at some time during the growing season each year. Wetland buffers are defined in the RPO as areas that “provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community.”

None of the drainages on site has these characteristics; therefore, no County RPO wetlands occur on the Sugarbush parcel. County RPO wetlands occur off site near the intersection of Buena Creek Road and Cleveland Trail. As a perennial stream with a predominately non-soil substrate, Buena Creek is considered a County RPO wetland. The freshwater marsh west of Cleveland Trail also is considered a County RPO wetland because it is dominated by cattails, which are considered hydrophytes. Outside of the freshwater marsh and Buena Creek itself, vegetation is dominated by upland plants like coast live oak and palm trees, with upland understory vegetation. The southern coast live oak riparian forest (beyond the banks of Buena Creek) is not considered a County RPO wetland because it does not predominately contain hydrophytes, does not have undrained hydric soil, and is located beyond the banks of the Buena Creek streambed. This area is, however, considered an RPO wetland buffer.

### Sensitive Resources

Sensitive resources are those defined as: (1) unique habitat areas or vegetation communities that have relatively limited distribution or that are of particular value to wildlife; and (2) species given special recognition by federal, state, or local government agencies and organizations due to limited, declining, or threatened populations. Figure 2.2-1 provides a graphic representation of sensitive resources on site and the adjacent Cleveland Trail alignment.

### Sensitive Vegetation Communities

The Project site encompasses a large block of undeveloped land, the majority of which is vegetated with native habitats. Eight of the vegetation communities/habitat types mapped for the Project are considered sensitive: southern coast live oak riparian forest, freshwater marsh, coast live oak woodland, Diegan coastal sage scrub (including disturbed), coastal sage-chaparral scrub, coyote brush scrub, southern mixed chaparral and non-native grassland. Although it is not considered sensitive, eucalyptus woodland has the potential to support nesting raptors, which are protected under the federal Migratory Bird Treaty Act (MBTA).

The Project site is shown as very high quality habitat in the northwest and south, high to moderate quality in the center of the project site, and agriculture in the eastern portion of the site on the Habitat Evaluation Model (HEM) for this portion of the County. The coastal sage scrub of highest quality for sensitive species is found on the flatter areas in the west of the site and on the ridge in the northwest of the site.

Pursuant to the state Natural Communities Conservation Planning (NCCP) Guidelines (1993), the coastal sage scrub habitat evaluation rated the site as having intermediate potential value for long-term conservation.

### Sensitive Plant Species

No federally or state-listed threatened or endangered plant species were observed on site; however, one species recognized as sensitive by the County was observed: ashy spike-moss (*Selaginella cinerascens*). This County List D species is a prostrate perennial groundcover that generally occurs in undisturbed chaparral and Diegan coastal sage scrub. Populations of this plant were observed in several locations throughout the Project site, primarily in Diegan coastal sage scrub and non-native grassland habitats.

Potentially occurring sensitive plant species were assessed based on known distribution, habitat requirements, and existing site conditions. Despite the mostly negative findings of the two rare plant surveys, some sensitive plant species still have some potential to occur on the site. Sensitive plant species not observed but with potential to occur on site are listed and discussed on Table 2.2-2, Listed or Sensitive Plant Species with Potential to Occur.

### Sensitive Animal Species

One federally listed threatened species (the coastal California gnatcatcher) was observed on site; in addition, three County sensitive species (white-tailed kite [*Elanus leucurus*], red-shouldered hawk [*Buteo lineatus*] and turkey vulture [*Cathartes aura*]) were observed.

Coastal California gnatcatcher, a federally listed threatened and County Group 1 species, was observed during protocol surveys conducted on the site. One pair was observed in the coyote brush scrub habitat in the middle of the Project site in 2002. One individual was observed within Diegan coastal sage scrub in the center of the site during one day of three-day surveys in both 2003 and 2009.

White-tailed kite, a California fully protected and County Group 1 species, was observed flying over the coast live oak woodland in the western portion of the site. Red-shouldered hawk and turkey vulture, which have no federal or state status but are County Group 1 species, were observed soaring over the property.

Sensitive animal species not observed but with potential to occur on site are listed and discussed on Table 2.2-3, Listed or Sensitive Animal Species with Potential to Occur.

### Wildlife Corridors

Two types of wildlife corridors potentially occur on site: local and regional. Local corridors allow animal access to resources such as food, water and shelter. Animals can use these corridors (such as the hillsides and tributary drainages to the main drainage on site) to travel from riparian to upland habitats and back. Currently, wildlife may access Buena Creek from the site by traversing upland habitat and by following the east-west running drainage in the northern portion of the site. Access to Buena Creek from the site is somewhat limited by the existing residential development abutting the western site boundary. Local wildlife movement is more restricted within Buena Creek because it becomes a narrow channel extending along Buena Creek Road with numerous intervening crossings and culverts. Based on the limited access, small area, adjacent development, and relatively small number of animal species observed during field studies, local wildlife movement is considered to be limited.

Regional corridors provide access functions as well but also link two or more major areas of undeveloped land. The project site is at the northwest corner of a large block of undeveloped land that extends south to Palomar College and State Route 78 in San Marcos. This large block of habitat is isolated by urban and suburban development and agriculture from large habitat area located to the north, south, and west. The large block of habitat of which this site is a part is partially located within the City of San Marcos' draft Multiple Habitat Conservation Plan (MHCP) Focused Planning Area (FPA). The USFWS, CDFG and County also have indicated the Project site may function as a "stepping stone" corridor for bird species to areas off site to the north and west. Visual continuity from the site with the closest large block of habitat (San Marcos Mountains) one-half mile north is blocked from all but the highest slopes and ridges on site. This, combined with the apparent lack of significant population of sensitive resources, suggests the site may not play a significant role in regional wildlife movement.

The on-site tributary drainage to Buena Creek that ultimately enters Agua Hedionda Creek may provide some corridor function for wildlife movement between the site and Buena Creek.

#### **2.2.1.2 Regulatory Framework**

Laws and regulations that apply include the federal Endangered Species Act (ESA), MBTA, Clean Water Act (CWA), California Fish and Game Code, NCCP Act and County's RPO. In addition, the County's proposed North County Multiple Species Conservation Program (MSCP; County 2009a) would be applicable to the Project.

##### Federal Government

The USFWS takes jurisdiction over species listed as threatened or endangered under the ESA. The USFWS would require take authorization pursuant to the ESA for take of the federally listed threatened coastal California gnatcatcher and its Diegan coastal sage scrub habitat. (Although no direct "take" of gnatcatcher is anticipated for this Project, its habitat would be impacted, as discussed in Sections 2.2.2.1 and 2.2.2.2 of this subchapter.) A Section 10(a) permit may be pursued, which is a take authorization solely permitted by the USFWS. Alternately, impacts to gnatcatchers could be authorized through a Section 7 consultation with the USFWS. A Section 7 consultation can occur when there is a nexus between listed species' (in this case, the gnatcatcher) use of the site and ACOE jurisdictional areas or other federal agency actions. A special provision for coastal California gnatcatchers under Section 4(d) of the ESA allows the County to issue a take authorization with concurrence from the USFWS and CDFG. The appropriate permit would be determined by the USFWS, CDFG and County.

The MBTA is a federal statute that prohibits the ability to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention... for the protection of migratory birds... or any part, nest, or egg of any such bird." This statute allows the USFWS to enforce the prohibition of direct "taking" of active nests. Implementation of this law typically includes restrictions on development activities when sensitive nesting birds, including raptors, are present.

Discharge of fill into Waters of the U.S. is regulated by the ACOE under Section 404 of the federal CWA. The California Regional Water Quality Control Board (RWQCB) provides waivers or certifications under Section 401 of the CWA. Impacts to ACOE jurisdictional areas would require a permit under Section 404 and a waiver or certification under Section 401 of the CWA.



### State of California

The California Fish and Game Code regulates species listed as threatened or endangered under the California Endangered Species Act (CESA) and impacts to rivers, streams, or lakes from which plants or wildlife derive benefit under Section 1600. Although the County is enrolled in a subregional NCCP plan, the CDFG administers the NCCP Guidelines as a Trustee Agency. For this reason, the Project would need to demonstrate conformance with the NCCP Guidelines for take of Diegan coastal sage scrub as required for a 4(d) permit and would require permits pursuant to California Fish and Game Code Section 1602 for impacts to streambeds.

The objective of the NCCP Act, passed by the state of California in 1991, is to conserve natural communities and accommodate compatible land uses. The NCCP is broader in its orientation and objectives than the California and federal ESAs. Those laws are designed to identify and protect individual species that have already declined significantly in number. The objective of the NCCP is to conserve natural communities (thereby also preserving the species that live in them) and accommodate compatible land uses. The focus of the California pilot program is the Diegan coastal sage scrub community of southern California. Diegan coastal sage scrub supports the federally listed threatened coastal California gnatcatcher and approximately 100 other potentially threatened or endangered species. Working with landowners, environmental organizations, and other interested parties, the local agency in each subregion or subarea oversees the numerous activities that compose the development of a conservation plan. The CDFG and USFWS provide the necessary support, direction and guidance to NCCP participants in these functions. The County is participating in the NCCP.

### County of San Diego

The MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve. The County adopted an MSCP Subarea Plan on October 22, 1997 for the southwestern portion of the County (County 1997). The County currently is in the process of preparing the North County MSCP Subarea Plan. A preliminary draft of the North County Plan was released for public review on February 19, 2009. The Project site is within the planning area of the proposed North County Segment of the MSCP. Because the North County Segment of the MSCP does not currently apply due to its current status, conformance with the MSCP and associated Biological Mitigation Ordinance (BMO) are not required for the Proposed Project.

The County regulates impacts to biological resources through its RPO. Sensitive habitat lands, as defined therein, require avoidance or minimization of impacts or mitigation. The RPO also regulates wetlands and is implemented with a requirement to avoid impacts to the maximum extent practicable. The County also provides 4(d) permits under the ESA through its Habitat Loss Permit (HLP) Ordinance with concurrence from the USFWS and CDFG.

## **2.2.2 Analysis of Project Effects and Determination as to Significance**

This section describes potential direct and indirect impacts associated with the Proposed Project, including off-site improvements to the Cleveland Trail emergency access road and adjacent sewer and water lines, as well as vegetation clearance and grading in the vicinity of the Buena Creek Road/Sugarbush Drive intersection. Direct impacts immediately alter the affected biological resources such that those resources are eliminated temporarily or permanently. Indirect impacts are those that occur when the Project footprint would not result in direct impacts, but the Project presence would introduce or intensify elements ultimately resulting in impacts (e.g., noise or increased or contaminated runoff). Although the Proposed Project would be responsible for 16 feet of brush clearing, and trimming and grass

brushing along Cleveland Trail off site, these measures currently are required for the existing road; therefore, no off-site brush management impacts are assessed to the Project along Cleveland Trail. Other (off-site) improvements due to traffic mitigation (e.g., re-striping of Buena Creek Road at Sugarbush Drive) would not cause further impacts to sensitive biological resources either on or off site because these activities would occur entirely within existing disturbed or developed areas. Two right-of-way and utility easements bisect proposed open space. One is located to the south of the proposed extended Sugarbush Drive, and one abuts the residential pad area of Lot 11 (refer to Section 1.2.1.2, Retained Easements, in Chapter 1.0). These easements are considered impact-neutral. Habitat within it is not included within biological open space acreage and would not be applied toward the required project mitigation. Staging areas would be located within the area to be developed.

### ***2.2.2.1 Riparian Habitat and Other Sensitive Natural Communities***

#### **Guidelines for the Determination of Significance**

Impacts to biological resources would be significant if the project would:

1. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS, including the potential to:
  - a. Temporarily or permanently remove sensitive native or naturalized habitat on or off the project site through grading, clearing, construction or other activities;
  - b. Result in any of the following to or within jurisdictional wetlands and/or riparian habitats as defined by the ACOE, CDFG and the County: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity or abundance;
  - c. Draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of three feet or more from historical low groundwater levels;
  - d. Increase human access or competition from domestic animals, pests or exotic species to levels proven to adversely affect sensitive habitats; and/or
  - e. Fail to provide a wetland buffer sufficient to protect the functions and values of existing wetlands.
2. Have a substantial adverse effect on federal-protected wetlands through direct removal, filling, hydrological interruption or other means.

The referenced guidelines are adapted from the County's Guidelines for Determining Significance — Biological Resources (July 30, 2008), based on the resources present or potentially present on, and regulations applicable to, the Project site.

## Analysis

### Direct Impacts

#### *Habitats*

The Proposed Project would impact a total of 40.7–8 acres, including 38.4–9 acres from on-site Project grading and brush management (including 0.4 acre within the oak root zone), 0.9 acre by habitat creation and 1.0 acre by off-site improvements to Cleveland Trail, water and sewer lines within/adjacent to that road and sight distance improvements at the Buena Creek Road/Sugarbush Drive intersection (Figure 2.2-4; Table 2.2-4). Impacts to sensitive vegetation communities would consist of 0.6 acre of coast live oak woodland (including 0.4 acre of identified oak root zones), 23.3–7 acres of Diegan coastal sage scrub<sup>2</sup> and 11.1 acres of non-native grassland.

Impacts to the root zone of coast live oaks could occur because of Project implementation (e.g., grading and soil compaction). Because brush management only involves removal of aboveground plant material and not disruption of the soil, it would only be anticipated to cause impacts to oak canopies, and not to the root system beneath. Root zone impacts are only assessed for oaks retained following Project development (oaks that are directly impacted by Project grading or brush management could not be further impacted by damage to their roots). The sewer pipeline near the intersection of Cleveland Trail and Buena Creek Road would be installed using a jacking and boring operation that installs the pipes underground without using standard trenching techniques. This method would not affect vegetation above ground level, but would impact 150 square feet of the oak root zone. Project effects within the existing footprint of Cleveland Trail, including road improvements and sewer and water line installation, would not be considered impacts to the oak root zone because they would be located within the already compacted/developed road, and any roots in these areas would have been previously impacted by the road. Impacts to coast live oak woodland (including impacts to the oak root zone), Diegan coastal sage scrub (including disturbed) and non-native grassland would be **significant. (Impacts BI-1a through c, respectively)** Impacts to the other (non-native) vegetation communities on site would be **less than significant**.

#### *Jurisdictional Areas*

On Site. The main access road in the north-central portion of the site would impact 170 linear feet (320 square feet) of drainage identified as an ephemeral ACOE jurisdictional non-wetland Waters of the U.S. and a CDFG jurisdictional streambed (Figure 2.2-5). This drainage does not support wetland vegetation and is not regulated pursuant to the County RPO. Because it is not a wetland, **no impact** to federal-protected wetlands would occur to this on-site drainage, pursuant to Guideline 2. The jurisdictional feature functions and values impacted by the Proposed Project would be a lack of groundwater recharge and floodwater conveyance along the length of the pipe installed to convey flows under the proposed main access road. As water would exit the pipe downstream of the crossing, groundwater recharge would be restored immediately. No net reduction in the functions and values of the drainage, including a reduction in groundwater recharge, would, therefore, occur. At present, the drainage dissipates downstream of the crossing for the main access road, indicating a reduction in surface flow owing to percolation of the water into the substrate. The Project would therefore not be expected to cause a net

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<sup>2</sup>These 23.7 acres of Diegan coastal sage scrub include 0.4 acre that was previously impacted by an abutting neighbor during brush clearing activities. Of this total, 0.3 acre would be included within proposed on-site fuel modification zone in accordance with VFPD request. A total of 0.1 acre of area previously brushed would be located within Project biological open space as it would no longer be subjected to brush management and is in the process of regenerating.

loss of functions and values. Nonetheless, physical disturbance of the on-site non-wetland water is considered a **significant impact**. (**Impact BI-2**)

In addition to the stream crossing, the main access road includes one proposed box culvert, which would not cause further direct impacts to any jurisdictional features. The culvert would be positioned where the access road crosses a shallow swale between a small ephemeral drainage to the south and the main on-site drainage to the north. This area is characterized by upland (Diegan coastal sage scrub) vegetation and has no physical evidence of surface flow (drift lines, sediment deposits, etc.). Because the required wetland criteria are not met, this area is not ACOE, CDFG or RPO jurisdictional.

Off Site. Off-site improvements to Cleveland Trail and associated utility installation would avoid impacts to ACOE, CDFG and RPO jurisdictional features. As such, no permits would be required for off-site impacts.

Cleveland Trail is an existing road that provides access to existing residences. The existing roadway crossing of Buena Creek would not be altered by the Proposed Project. Water and sewer lines in this location would be installed within the roadbed, above the existing culvert, and therefore would not affect the creek.

Installation of the proposed eight-inch sewer line immediately south of the intersection of Cleveland Trail and Buena Creek Road, which diverges from Cleveland Trail approximately 30 feet from the freshwater marsh, would occur using the jack-and-bore technique. This technique would not disturb the vegetation or affect the ground surface, thereby avoiding direct impacts to jurisdictional impacts. Runoff would continue to enter the freshwater marsh without impediment or increased siltation. All other improvements in this area would occur within the existing disturbance footprint of Cleveland Trail, and thus would not constitute a new use adjacent to existing CDFG and RPO wetlands and wetland buffers. BMPs would be employed during construction to minimize potential indirect impacts to the freshwater marsh and its buffer.

Off-site impacts to jurisdictional areas would therefore be **less than significant**.

#### Indirect Impacts

Potential indirect impacts to sensitive natural communities from Project construction and operation could include decreased water quality (through sedimentation, urban contaminants, or fuel release, for example), fugitive dust, colonization of non-native plant species, edge effects and human activity. The habitat on site currently is subject to edge effects due to adjacent residential development and associated use of the property by neighbors and their pets.

Water quality in wetlands/Waters of the U.S. can be adversely affected by potential surface runoff and sedimentation during construction. The use of petroleum products (fuels, oils, lubricants) and erosion of cleared land during construction could potentially contaminate surface water. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources. These potential impacts would be minimized through Project design measures and compliance with applicable County stormwater permitting requirements (refer to Table 1-1 and Section 3.1.3 of this EIR for details). As a result, these impacts would be **less than significant**.

Fugitive dust produced by construction has the potential to disperse onto preserved vegetation, which may reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. This in turn could affect animals dependent on these plants (e.g., seed-eating rodents). Fugitive dust also may make plants unsuitable as habitat for insects and birds. Active construction areas and unpaved surfaces would be watered pursuant to County grading permit requirements to minimize dust generation. Due to this dust suppression, native habitats and sensitive

plant and animal species are not anticipated to be substantially impacted, and indirect impacts due to dust would be **less than significant**.

Non-native plants could colonize areas disturbed by construction and potentially could spread into adjacent native habitats, especially following a disturbance such as fire. Many non-native plants are highly invasive and can displace native vegetation (reducing native species diversity), potentially increase flammability and fire frequency, change ground and surface water levels, and adversely affect native wildlife dependent on the native plant species. The extent of the potential for increased non-native plant species in the area would be limited because use of invasive species in landscaping would be prohibited, and fire walls would be installed along the urban/wildland interface. Further colonization by non-native plant species in non-impact areas and potential degradation of open space for use by native species, if it were to occur, would be considered a **significant impact**. **(Impact BI-3)**

Edge effects occur when development or grading traverses an undeveloped area with substantial native habitat surrounding the impact area. The edges of such disturbed areas act as a gateway for non-native plant species invasion and for predators (native and non-native) to access prey that may otherwise have been protected within large, contiguous blocks of habitat. In addition, secondary extinctions through disruption of predator-prey, parasite-host, and plant-pollinator relations can occur (Soulé 1986). The clustered nature of development within the Proposed Project and siting of the development adjacent to off-site development minimizes the edge effects to the maximum extent feasible. Impacts would therefore be **less than significant**.

Increases in human activity in the area could result in degradation of sensitive vegetation by further fragmenting habitat and forming edges through the creation of roads and removing existing vegetation. In addition, illegal dumping of lawn and garden clippings, trash, and other refuse could occur. The extent of potential incursion would be limited because no trails are proposed in the open space and there would be fire walls installed along the urban/wildland interface. Should they occur, these impacts would be **significant**. **(Impact BI-4)**

#### **2.2.2.2 Special Status Species**

##### Guidelines for the Determination of Significance

Impacts to biological resources would be significant if the project would:

3. Have a substantial adverse effect either directly or through habitat modifications on any species identified as a listed candidate, sensitive or special status species in regional or local plans, policies, or regulations, or by the CDFG or USFWS, including:
  - a. Any impact to one or more individuals of a species that is federal- or state-listed endangered or threatened;
  - b. Impacts that would affect the regional long-term survival of a County Group A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern; or result in the loss of five percent or more of an existing population of such species;
  - c. Impacts that would affect the regional long-term survival of a County Group C or D plant species or a County Group II animal species;

- d. Impacts that would result in a loss of five or more acres of functional foraging habitat for raptors, unless a biologically based determination can be made that the Project would not have a substantially adverse effect on the regional long-term survival of any raptor species;
- e. Increase noise and/or night-time lighting to a level above ambient proven to adversely affect sensitive species;
- f. Increase human access or predation or competition from domestic animals, pests, or exotic species to levels that would adversely affect sensitive species; and/or
- g. Impact nesting success through grading, clearing, fire fuel modification, and/or other noise-generating activities, such as construction, that would occur within the following distances, unless a biologically based determination can be made that the Project would not have a measured adverse effect on the regional long-term survival of the following species:

Species	Distance	Breeding Season
Coastal California gnatcatcher	300 feet from occupied habitat/nest	February 15 to August 31
Tree-nesting raptors	500 feet from occupied habitat/nest	January 15 to August 31
Ground-nesting raptors	800 feet from occupied habitat/nest	February 1 to August 31

The referenced guidelines are adapted from the County's Guidelines for Determining Significance — Biological Resources (July 30, 2008), based on the resources present or potentially present on, and regulations applicable to, the Project site.

### Analysis

#### Sensitive Plant Species

The Proposed Project would impact one sensitive plant species, ashy spike-moss, a County List D species which occurs within Diegan coastal sage scrub and non-native grassland throughout the central portion of the Project site (Figure 2.2-4). Due to the low level of sensitivity of this species and preservation of suitable habitat on site, the Proposed Project would not affect the regional long-term survival of the species. The impact, therefore, would be **less than significant**.

#### Sensitive Animal Species

The Proposed Project could impact the coastal California gnatcatcher by direct loss of habitat, particularly Diegan coastal sage scrub (Figure 2.2-4). One gnatcatcher pair was observed within the Project site in 2002, and a single individual was observed in the same general location in both 2003 and 2009. The locations where the birds were sighted would not be directly impacted by the Proposed Project. Because the gnatcatcher is a federally listed threatened species, however, impacts to individuals or habitat would constitute a **significant impact**. (**Impact BI-5**)

The site contains foraging habitat for a variety of raptor species, including the observed white-tailed kite, red-shouldered hawk and turkey vulture. Although raptors are opportunistic in their foraging strategies and will use almost any open habitat where rodents, birds and reptiles are present, they typically prefer open shrub-lands, grassland and pastureland because prey is more conspicuous and accessible in these habitats. Impacts are identified to raptor foraging with the direct loss of approximately 12.8 acres of

foraging habitat; including 1.7 acres of disturbed Diegan coastal sage scrub and 11.1 acres of non-native grassland (10.5 acres of non-native grassland would be impacted by development and 0.6 acre by oak woodland creation). Vegetation density within intact Diegan coastal sage scrub, coyote brush scrub and coastal sage-chaparral scrub is likely too high to support raptor foraging. Because impacts would occur to more than five acres of raptor foraging habitat, the impacts would be **significant. (Impact BI-6)**

The proposed loss of habitat also has potential to impact migratory birds that may be nesting within the impact footprint. The MBTA makes it unlawful to directly take any migratory bird or part, nest, or egg of such bird listed in wildlife protection treaties between the U.S. and other countries. Most nongame bird species are protected under the MBTA. Under the MBTA, impacts from clearing of habitat that supports nesting migratory birds would be considered **significant. (Impact BI-7)**

#### Indirect Impacts

Potential indirect impacts from Project construction could include animal behavioral changes, noise, night lighting, roadkill and attraction of nuisance animal species.

Breeding birds and mammals may temporarily or permanently leave their territories to avoid construction activity, which could lead to reduced reproductive success and increased mortality. Grading, clearing or construction activities within 300 feet of an active coastal California gnatcatcher during this species' breeding season (February 15 through August 31) would have the potential to disrupt nesting behavior. This potential adverse effect would constitute a **significant impact. (Impact BI-8)**

Although the impact to eucalyptus woodlands on site would not of itself be significant, these wooded areas can support nesting by various raptor species such as the red-tailed hawk (*Buteo jamaicensis*), great horned owl (*Bubo virginianus*), Cooper's hawk (*Accipiter cooperii*) and barn owl (*Tyto alba*). In addition, the non-native grassland areas being impacted as well as other native habitats like Diegan coastal sage scrub may support foraging for several resident, migratory and wintering raptor species. Grading, clearing, or construction within 500 feet of an active tree-nesting raptor nest or 800 feet of an active ground-nesting raptor within the raptor breeding season (January 15 to July 15 for tree-nesting raptors and February 1 to July 15 for ground-nesting raptors) could disrupt nesting. This potential adverse effect would comprise a **significant impact. (Impact BI-9)**

Construction noise from such sources as grading, ripping, drilling, blasting, rock breaking, grubbing and vehicular traffic could result in temporary impacts to local wildlife. Noise-related impacts would be considered significant if sensitive species (such as gnatcatchers or raptors) were displaced from their nests and/or failed to breed. Although birds and other species would be expected to return following grading, they may be temporarily displaced from the vicinity of the construction area. Construction noise exceeding 60 dBA  $L_{eq}$  within areas with nesting gnatcatchers or raptors would be a **significant impact. (Impact BI-10)**

Night lighting on native habitats can prevent nocturnal wildlife from using an area. Although no lighting is expected to occur within the construction zone because work would be during the day, there is a potential for night lighting to occur in the staging areas (anticipated to be limited to situations when repairs are needed to equipment damaged during the work day), as well as in the new residential area following construction. Night lighting could cause an increased loss in native wildlife, as it can provide nocturnal predators with an unnatural advantage over their prey. As a Project design feature, exterior lighting within the Project adjacent to preserved habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded and directed away from preserved habitat to the maximum extent feasible. The habitat manager for the proposed on-site biological open space would ensure that lighting is properly placed and shielded from open space. As a result, impacts would be **less than significant.**

Roadkill could occur as vehicles travel on both external roads leading to the Project site and internal roads associated with the Project. The Proposed Project would produce approximately 540 ADT. Impacts due to increased human access are considered **less than significant** pursuant to Guideline 3f due to the limited number of vehicle trips that the Project is likely to generate, and the fact that the only federally or state listed species known to occur on site is the coastal California gnatcatcher, which is not known to be susceptible to roadkill.

The Project has the potential for domesticated animals to impact native wildlife. Cats, especially, are known to hunt rodents and birds. Domestic animals potentially could significantly impact native wildlife in the immediate area. Animals inhabiting the open space areas may be particularly susceptible. A six-foot high fire wall would be constructed between the proposed houses and open space along the eastern and southern boundaries of the development footprint, which would minimize the incursion of domestic animals into the open space. In addition, the presence of coyotes on site would help control domestic animals that may enter the native habitat. Impacts would be **less than significant**.

### **2.2.2.3 Wildlife Corridors**

#### Guidelines for the Determination of Significance

Impacts to biological resources would be significant if the project would:

4. Interfere substantially with the movement of a native resident or migratory wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, including if the project would:
  - a. Prevent wildlife access to foraging habitat, breeding habitat, water sources or other areas necessary for their reproduction;
  - b. Substantially interfere with connectivity between blocks of habitat, or that would block or potentially interfere with a local or regional wildlife corridor or linkage;
  - c. Create artificial corridors that do not follow natural movement patterns;
  - d. Increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement;
  - e. Fail to maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor by reducing width, removing available vegetative cover, placing incompatible uses adjacent to it, or placing barriers in the movement path; and/or
  - f. Fail to maintain adequate visual continuity within wildlife corridors or linkages.

The referenced guidelines are adapted from the County's Guidelines for Determining Significance — Biological Resources (July 30, 2008), based on the resources present or potentially present on, and regulations applicable to, the Project site.

#### Analysis

During construction activities, some wildlife movement could be disrupted at the location of the construction. Once complete, the Project would consist of residential units, roads and other residential-related structures and appurtenances that would create a barrier to local wildlife movement in the southwestern corner of the site.



Land to the east and south of the Project site is undeveloped and adds to a larger, regional habitat area for plant and animal species. Wildlife currently can use most habitats on site and can access habitats off site without restriction. The Project is designed to maintain connectivity of preserved habitats on site with regional connections to large off-site vacant lands to east and south. With the preservation of the majority of the habitat on site and clustering of homes in the southwest corner of the site, significant effects to regional wildlife corridors in the project vicinity are not anticipated.

The placement of the main Project access road across the northern portion of the site would result in some impedance to local wildlife movement between the site and Buena Creek. While the roadway likely would cause some restriction to animal movement, it would not result in a complete blockage. Birds would be able to fly over the roadway at will. Other animals would be able to cross the road, although this likely would result in some level of road kill (discussed more specifically in Section 2.2.2.2 of this subchapter). Additionally, small animals, such as raccoons, ground squirrels, rabbits, and woodrats may use the culverts under the main access road to cross the site. In summary, while there would be some effect upon localized wildlife movement, the resultant impact is considered to be **less than significant** pursuant to Guideline 4.

#### **2.2.2.4 Local Policies, Ordinances, Adopted Plans**

##### Guidelines for the Determination of Significance

Impacts to biological resources would be significant if the project would:

5. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan; specifically, if the project would:
  - a. Impact coastal sage scrub vegetation in excess of the County's five percent habitat loss threshold as defined by the Southern California Coastal Sage Scrub NCCP Guidelines;
  - b. Preclude or prevent the preparation of the subregional NCCP;
  - c. Impact any amount of wetlands or sensitive habitat lands as outlined in the RPO;
  - d. Fail to minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Guidelines;
  - e. Preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines;
  - f. Reduce the likelihood of survival and recovery of listed species in the wild; and/or
  - g. Result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs.

The referenced guidelines are adapted from the County's Guidelines for Determining Significance — Biological Resources (July 30, 2008), based on the resources present or potentially present on, and regulations applicable to, the Project site.

##### Analysis

The Project would be subject to the requirements of the NCCP and Section 4(d) of the federal ESA for impacts to Diegan coastal sage scrub. The requirements of the NCCP and 4(d) process are designed to

maintain the viability of ecosystems and future regional preserve design such that cumulative impacts of projects to Diegan coastal sage scrub would be less than significant. Further, the limitation of the allowable take of Diegan coastal sage scrub to County-wide five percent of that remaining as of the date of the HLP Ordinance (March 30, 1994) limits future cumulative impacts to an amount considered less than significant by the USFWS and CDFG. Project impacts to approximately 23.3-7 acres of Diegan coastal sage scrub (including disturbed) habitat would require mitigation at a 2:1 ratio. Proposed Project design would result in preservation of coastal sage scrub habitats on site that is ~~24.4~~20.2 acres over the amount required to meet this ratio and, as described in detail in Section 2.2.2.3, would maintain connectivity of preserved habitats on site with regional connections to large off-site vacant lands to the east and south. While the Proposed Project would remove Diegan coastal sage scrub habitat, implementation of mitigation for habitat loss would ensure that the Proposed Project complies with the NCCP guidelines.

The Project site is not within the boundaries of an adopted HCP/NCCP. It is, however, within the boundaries of the draft North County MSCP, a preliminary draft of which was released for public review on February 19, 2009 (County 2009a). Approximately 93 acres of the western portion of the site are within the proposed Pre-approved Mitigation Area (PAMA) under that plan, as illustrated on Figure 2.2-6. The PAMA would not preclude development, but rather would impose design criteria, such as the consolidation of development to minimize impacts, for development projects proposed within it.

Implementation of the Proposed Project would impact approximately 39 acres of land identified as PAMA in the draft North County MSCP. Through discussions with the resource agencies it was determined that clustering of development in the southwestern portion of the property would be appropriate and was incorporated into Project design. Given that the current zoning for the Project site would allow one house per two acres, the proposed clustering of houses would better preserve the functions and values of habitat and minimizes impacts to sensitive habitats and species on site, allowing the biological open space to be contiguous with the large habitat area off site to the south and east. Although there is no regional corridor on site, a 500-foot corridor is proposed to provide access to nearby open space. The Proposed Project would conserve a total of 75.7 acres (66 percent) in on-site biological open space, including approximately 55 acres within the PAMA and 21 acres outside the PAMA. The Project's proposed mitigation ratios for coast live oak woodland and Diegan coastal sage scrub exceed those that would be required under the MSCP, and the overall amount of on-site impacts/conservation would be consistent with the assumptions made in the MSCP preserve analysis (County 2009a). The continuity of the open space configuration for the Project should preclude disruption of any existing archipelago habitat system. In addition, the Proposed Project would preserve the locations of the on-site California gnatcatcher sightings.

As a result of these considerations, the Project would not preclude or prevent preparation of the subregional NCCP (in this case, the North County MSCP) nor would it reduce the likelihood of survival and recovery of a species in the wild. The Proposed Project also would not impact wetlands, wetland buffers, or sensitive habitat lands as outlined in the RPO. The Project Applicant would be required to obtain an HLP, Section 10 permit or Section 7 authorization from USFWS for take of coastal California gnatcatcher habitat. The Proposed Project would conform to the goals and requirements of the HLP Ordinance and avoid direct impacts to migratory bird nests and/or eggs as a matter of law. As such, impacts to local policies, ordinances, or adopted plans are assessed as **less than significant**.

### **2.2.3 Cumulative Impact Analysis**

Project impacts to biological resources would be significant if the Project would have biological impacts that are individually limited but cumulatively considerable. Although individual environmental effects of a project may be determined to be insignificant when analyzed separately, the additive effect when viewed in connection with impacts of past, present and future projects may cause the significant loss or degradation of a resource.

The cumulative project study area was based on sensitive resources found on site and how they related to similar resources both locally and regionally. To the north, the study area ends at Gopher Canyon, which provides an east-west corridor that ultimately connects to both the San Luis Rey River and Daley Ranch core habitat areas. To the east, I-15 and development in Escondido act as a significant barrier to wildlife movement. To the west, Vista and the unincorporated communities of Buena Vista and Buena act as barriers to wildlife movement, as do SR 78 and San Marcos to the south. To summarize, the area of consideration for cumulative biological projects impacts was restricted to projects occurring south of Gopher Canyon Road; west of I-15 and Escondido; north of Deer Springs Road and Mission Road; and east of urban development in Vista. The only cumulative project sites that have burned since 1970 are Brisa Del Mar (No. 6; 2006) and Cal-a-Vie (#11; 1985).

A total of 45 projects (not including the Proposed Project) were reviewed for this cumulative analysis (Figure 2.2-7; Table 2.2-5). In addition to significant biological resource impacts associated with the Proposed Project, 25 of the 45 cumulative projects would result in significant or potentially significant impacts to biological resources. It is noted that one of the projects (San Marcos Highlands) identified as having significant biological impacts has been denied. While no biological impacts are specified for 19 projects, 2 of these projects would likely have impacts, 3 projects did not have an environmental document in the file, and 1 project was exempt from CEQA. The remaining 13 projects would not have any significant biological impacts.

Regionally, including the lands surrounding the biological cumulative study area, substantial amounts of sensitive habitat have been lost to urbanization. This loss of habitat has affected associated plant and animal species, leading, for example, to the federal listing of the coastal California gnatcatcher as threatened. Concern regarding the loss of habitat and species has led to the development of plans and regulations (e.g., MSCP, MHCP, HLP Ordinance) to minimize the extent of future loss. For example, the HLP Ordinance limits cumulative loss of coastal sage scrub from the date of its adoption to five percent of what remained at that time.

Excluding the Proposed Project, the 24 cumulative projects with available quantitative data would result in impacts to 28.1 acres of coast live oak woodland, 163.67 acres of Diegan coastal sage scrub, up to 195.13 acres of non-native grassland, and 1.04 acre of non-wetland Waters of the U.S./State. All projects would be required to conform to existing regulations with respect to avoidance, minimization and mitigation of impacts to sensitive habitat achieving no net loss of impacts to wetlands and like/kind replacement for impacts to sensitive habitat that cannot be avoided. Therefore, it is assumed that during the project review and approval process for these projects, the impacts to important biological resources would be mitigated at accepted ratios. Based on currently available information, the cumulative projects (excluding the Proposed Project) with available quantitative data would preserve a total of 323.24 acres of sensitive vegetation communities (56.9 acres of coast live oak woodland, 226.47 acres of Diegan coastal sage scrub, 38.93 acres of non-native grassland, and 0.94 acre of non-wetland Waters of the U.S./State). The cumulative projects are within the area covered by the NCCP and for which the County and cities of Escondido, San Marcos and Vista have signed agreements of participation. The NCCP planning process is specifically intended to address cumulative impacts to sensitive biological resources, including sensitive vegetation communities. The acres proposed to be preserved within the cumulative projects comply with the applicable ratio-based conservation requirements, and would therefore result in less than significant cumulative impacts for the habitats. Similarly, as described in Section 2.2.2.4, the Proposed Project: would not preclude or prevent the creation of the North County MSCP subregional plan, is able to make HLP findings, would satisfy the County's ratio-based mitigation requirements for vegetation/habitat impacts and would not result in cumulative impacts exceeding five percent of the County's coastal sage scrub. Based on this conformance, the Proposed Project's contribution to cumulative biological impacts would not be cumulatively considerable.

Six of the 20 cumulative projects with available data would impact habitat of the federally listed threatened coastal California gnatcatcher (Diegan coastal sage scrub) and 9 would impact raptors. Cumulative impacts to these sensitive animal species are addressed through preservation of appropriate habitat in conformance with the applicable NCCP requirements, as described above, and are therefore considered less than significant. Impacts to raptors are not considered cumulatively significant because of the extensive acreages of natural habitat preservation and foraging habitat within the cumulative project study area and the ability of raptors to use other nearby locations to nest and forage. The Proposed Project would result in the conservation of ~~24.4~~20.2 acres of sage scrub habitats over the amount required, would preserve the locales where gnatcatchers were observed, and would avoid disturbance during the avian breeding season. Based on these considerations, the Proposed Project's contribution to cumulative impacts to sensitive animal species would not be cumulatively considerable.

Analysis of cumulative effects on individual sensitive plant species is less clear because of the paucity of information from other projects. Regional cumulative impacts to sensitive plant species are species-specific based on the original distribution of the species (some are much more narrowly distributed than others) and the loss of appropriate habitat to date. The Proposed Project identifies impacts to ashy spike-moss, a County List D species and the only sensitive plant species found on site. Although not specifically identified in the available information, this species occurs frequently in Diegan coastal sage scrub and may be impacted by projects in the cumulative study area that would impact this habitat. Because the cumulative projects would preserve approximately 226.47 acres of sage scrub with potential to support this species, regional impacts to ashy spike moss would be less than significant. The Proposed Project also would conserve a substantial amount of suitable habitat for this species; therefore, its contribution to cumulative impacts to the species would not be cumulatively considerable.

Based on conformance to the NCCP and related County HLP requirements, the Proposed Project's contribution to cumulative biological impacts would not be cumulatively considerable. Cumulative impacts would be **less than significant**.

#### **2.2.4 Significance of Impacts Prior to Mitigation**

The following significant impacts related to biological resources would occur with Project implementation:

- Impact BI-1a The Project would result in significant impacts to 0.6 acre of coast live oak woodland (including 0.1 acre associated with on-site grading, 0.1 acre associated with off-site grading and 0.4 acre of oak root zone impacts).
- Impact BI-1b The Project would result in significant impacts to ~~23.3~~7 acres of Diegan coastal sage scrub (including 21.7 acres associated with on-site grading, ~~1.4~~7 acres associated with future on-site brush management, ~~and~~ 0.2 acre associated with sight distance improvements for the Buena Creek Road/Sugarbush Drive intersection, and 0.1 acre associated with previous brush clearing activities performed by an abutting neighbor, which is outside the future brush management area and anticipated to regenerate).
- Impact BI-1c The Project would result in significant impacts to 11.1 acres of non-native grassland (including 10.4 acres associated with ~~off~~on-site grading, 0.1 acre associated with brush management and 0.6 acre associated with on-site habitat creation).
- Impact BI-2 The Project would significantly impact 170 linear feet (320 square feet) of drainage that is considered an ephemeral ACOE ~~and CDFG~~-jurisdictional non-wetland Waters of the U.S. and a CDFG jurisdictional streambed.

- Impact BI-3 Colonization of non-native plant species in non-impact areas due to potential use of non-native plant species by residents in their yards and the resulting degradation of native habitat would be significant should it occur.
- Impact BI-4 Increases in human activity in the area could result in degradation of sensitive vegetation, which would be significant.
- Impact BI-5 The Project would significantly impact the federal-listed threatened coastal California gnatcatcher by direct loss of habitat. Impacts to individual birds also would be considered significant should they occur.
- Impact BI-6 The Project would result in the direct loss of approximately 12.8 acres of raptor foraging habitat, which would constitute a significant impact.
- Impact BI-7 Clearing of habitat that supports nesting migratory birds would constitute a significant impact.
- Impact BI-8 Significant impacts to coastal California gnatcatcher would occur if active nests are removed or if grading, clearing or construction activities occur within 300 feet of an active nest.
- Impact BI-9 Significant impacts to raptors would occur if active nests are removed or if grading, clearing or construction activities occur within 500 feet of active nests of tree-nesting raptors or 800 feet of active nests of ground-nesting raptors.
- Impact BI-10 Construction noise exceeding 60 dBA  $L_{eq}$  within areas with nesting gnatcatchers or raptors would be considered a significant impact.

### **2.2.5 Mitigation**

Mitigation is identified for each of the significant impacts identified above. Table 2.2-6, Summary of Required Mitigation for Impacts Associated with the Proposed Project, summarizes the amount of habitat impacted on and off the Project site, as well as the amount of required mitigation. The mitigation measures listed below would reduce Project impacts to biological resources to below a level of significance.

The mitigation outlined below for direct impacts to on- and off-site habitats includes preservation creation of habitat and enhancement of habitat on site. Appendix H of the Biological Technical Report (EIR Appendix D) contains the Conceptual HMP for the Project, which discusses restoration and management of the habitat to be preserved on site.

- M-BI-1a Impacts to 0.6 acre of coast live oak woodland shall be mitigated on site. Approximately 0.4 acre of existing coast live oak woodland shall be within the on-site biological open space easement. Approximately 0.9 acre of coast live oak woodland creation shall occur on existing non-native grassland and disturbed habitat within the biological open space.
- M-BI-1b Impacts to ~~23.3~~7 acres of Diegan coastal sage scrub shall be mitigated through on-site preservation at a 2:1 ratio (~~46.6~~47.4 acres).

- M-BI-1c Impacts to 11.1 acres of non-native grassland shall be mitigated at a 0.5:1 ratio. This requirement shall be partially met through on-site preservation of 2.4 acres of non-native grassland within the biological open space easement. The remainder of the requirement shall be met through on-site preservation of 3.2 acres of grass-dominated coastal sage scrub within the biological open space.
- M-BI-2 Impacts to 170 linear feet (320 square feet) of drainage jurisdictional to the ACOE and CDFG shall be met through removal of exotic plant species, including castor bean (*Ricinus communis*) and fennel (*Foeniculum vulgare*), from the length of the drainage. The Project Applicant shall obtain applicable regulatory permits from other agencies.
- M-BI-3 The following measures shall be implemented to mitigate potential impacts associated with further colonization by non-native plant species:
- The conceptual landscape plans include specifics regarding the types of plant species allowed along the Project footprint boundary. The final landscape plans shall be reviewed prior to approval to ensure that no invasive non-native plants (as identified by the California Invasive Plant Council) are used adjacent to any biological open space areas.
  - The Project Applicant shall implement the required HMP (Appendix H of EIR Appendix D) for the Proposed Project, including habitat monitoring and management to identify and minimize potential indirect effects to open space resources; exotic species control; and implementation of a homeowners' education program to educate residents of the sensitivity of the resources in the biological open space, basic stewardship, and prohibited/allowed activities in the open space. The conceptual HMP is a draft document that sets guidelines. A final Resource Management Plan (RMP) shall be prepared prior to Project grading.
- M-BI-4 The following measures shall be implemented to reduce impacts from edge effects and human activity:
- The limits of grading shall be flagged or marked with silt fencing prior to grading to prevent inadvertent impacts to adjacent sensitive habitat. Prior to brushing, a qualified biologist shall review the flagging and fencing.
  - A qualified biologist shall monitor the limits of grading during clearing, grubbing, and grading, as well as during trenching within Cleveland Trail and excavation of the jacking pits for installation of the sewer line between Cleveland Trail and Buena Creek Road. Monitoring shall be conducted once per day with weekly reports submitted to the County DPLU. If inadvertent impacts occur, they shall be reported to the appropriate agency within 24 hours.
  - The preserved open space areas shall be fenced off from the backyards of the proposed homes, and delineated with split rail fences along roadways adjacent to the open space preserve.
  - After completion of grading, permanent signs stating the following shall be erected along the limits of the open space:

Sensitive Environmental Resources  
Disturbance Beyond this Point is Restricted by Easement

Information:

Contact County of San Diego, Department of Planning and Land Use  
Ref: 02-08-047

- The Project applicant shall implement the required HMP (Appendix H of EIR Appendix D) for the Proposed Project, as outlined in M-BI-3.

- M-BI-5 Impacts related to loss of habitat for the coastal California gnatcatcher shall be mitigated through on-site Diegan coastal sage scrub preservation, as specified in M-BI-1c. Diegan coastal sage scrub supporting nesting gnatcatchers shall not be removed during the breeding season (February 15 through August 30 or until all nesting is complete). Prior to construction, demonstration of the absence of gnatcatchers shall require surveys pursuant to USFWS protocol, with clearing of unoccupied habitat requiring concurrence of the wildlife agencies.
- M-BI-6 Impacts related to loss of raptor foraging habitat shall be mitigated through on-site preservation of Diegan coastal sage scrub and non-native grassland, as specified in M-BI-1c and M-BI-1d.
- M-BI-7 Compliance with the MBTA requires vegetation clearing to occur outside of the breeding season (February 15 through August 31). If clearing must occur during the breeding season, a pre-construction survey shall be conducted to determine the presence or absence of nesting birds within the project footprint. If no nests are found, clearing may commence. If nests are found, clearing shall be postponed until after the breeding season.
- M-BI-8 No grading or clearing shall be initiated within 300 feet of occupied habitat during coastal California gnatcatcher breeding season (February 15 through August 31). All grading permits, grading plans and improvement plans shall state the same. If clearing or grading would occur during gnatcatcher nesting season, a qualified biologist shall conduct a pre-construction survey, pursuant to USFWS protocol, to determine if this species occurs within impacted areas. With concurrence of the wildlife agencies and the County of San Diego, if there are no gnatcatchers nesting (including nest building or other breeding/nesting behavior) within this area, development shall be allowed to proceed.
- M-BI-9 No grading or clearing shall be initiated within 500 feet of occupied tree-nesting raptor habitat during raptor breeding season (January 15 through July 15), or within 800 feet of ground-nesting raptor habitat during raptor breeding season (February 1 through July 15). All grading permits, grading plans and improvement plans shall state the same. If clearing or grading would occur during raptor nesting seasons, a qualified biologist shall conduct a pre-construction survey to determine if these species occur within impacted areas. If there are no raptors nesting (including nest building or other breeding/nesting behavior) within this area, development shall be allowed to proceed. If a nest occurs in a tree to be impacted, the tree shall not be removed while the nest is active (potentially, January through July).
- M-BI-10 Construction activities shall not take place in proximity to an active gnatcatcher nest such that noise levels exceed 60 dB(A)  $L_{eq}$ . Noise levels will be periodically monitored by the

monitoring biologist and/or a noise specialist. Indirect impacts to raptor nests shall be mitigated through placement of a construction buffer, as specified in M-BI-9.

### **2.2.6 Conclusion**

The implementation of the mitigation measures listed above would reduce all impacts to biological resources to less than significant levels. The Proposed Project would directly impact coast live oak woodland, Diegan coastal sage scrub and non-native grassland (Impacts BI-1a through 1c, respectively). ~~Impacts to southern coast live oak riparian forest would be mitigated through a combination of revegetation and enhancement. The remaining v~~Vegetation impacts would be fully mitigated through on-site preservation (including creation in the case of oak woodland). Typically, impacts to coast live oak woodland are mitigated at a 3:1 ratio, which would correspond to 1.8 acres; however, a reduced mitigation ratio was approved because creation and preservation of on-site habitat is considered preferable to off-site preservation. Whereas off-site preservation would result in a net loss of coast live oak woodland, creation would add new habitat in the on-site managed preserve that contributes to retention/enhancement of habitat function in the area altered by the Project. In addition to preservation and creation within the biological open space, approximately 0.5 acre of coast live oak woodland would be preserved within an avoidance open space in the panhandle along Cleveland Trail in the western portion of the site (this would not apply toward Project mitigation). Altogether, the Project would preserve 1.8 acres of coast live oak woodland, including 0.5 acre of existing oak woodland within the avoidance open space, 0.4 acre of existing oak woodland in the biological open space, and 0.9 acre of created oak woodland in the biological open space. The proposed 1.3 acres of coast live oak woodland preservation and creation would result in a mitigation ratio of approximately 2.2:1, which would fully mitigate the impacts to 0.6 acre of habitat.

Implementation of the mitigation measures proposed for impacts to Diegan coastal sage scrub and non-native grassland would avoid or substantially reduce the significant effects because the mitigation ratios for impacts to these habitats were developed based on NCCP Guidelines (CDFG 1997), and the wildlife agencies have reviewed and approved these mitigation ratios. Additionally, these standard ratios have been applied to projects within the County since DPLU developed its first Biological Report Guidelines in the mid 1990s (adopted by the Board of Supervisors). The ratio is identified as effective because these reviewing agencies have reached consensus that retention at these ratios will result in sustainable levels of these habitats.

Impacts to jurisdictional non-wetland Waters of the U.S. (Impact BI-2) would be mitigated by removal of exotic plant species from the length of the drainage. Implementation of this mitigation measure would fully mitigate impacts to this non-vegetated jurisdictional areas because it would benefit both native plant species and animal species that utilize the drainage. The function of this non-wetland area would not be altered from such an improvement.

Indirect impacts related to spread of non-native plants and human encroachment (Impacts BI-3 and BI-4, respectively) during and after Project construction also would be appropriately mitigated. General mitigation for indirect impacts would include long-term management of the proposed open space; biological monitoring during clearing and grading activities; flagging of sensitive habitats and plants; placement of a fire wall between proposed residential lots and fuel modification zone; and implementation of the HMP. These mitigation measures would be adequate to avoid or reduce Project impacts, because they would ensure that construction equipment and personnel would stay within the limits of grading, thus preventing indirect impacts to habitats and sensitive species during construction. Similarly, the long-term management measures would decrease the likelihood of resident/visitor incursion into the Project open space, and minimize any associated impacts. Species survival in this area would be ensured through these measures.



Mitigation for direct Project impacts to coastal California gnatcatchers and raptors (Impacts BI-5 and BI-6, respectively) would be satisfied through the required mitigation for impacts to habitats. The specified habitat mitigation ratios take into consideration the importance of preserving areas necessary to ensure the continued survival of coastal California gnatcatchers and raptors. The habitat preservation ratio is effective, because through retention of sustainable habitat, sensitive species can continue to thrive. The mitigation would preserve species habitat, and thus, help ensure survival of these species within the Project site (open space) and within the County. The mitigation ratios utilized for impacts to these species' habitats were developed based upon NCCP Guidelines (CDFG and California Resources Agency 1997) intended to accomplish preservation of sensitive species, and the wildlife agencies have reviewed and approved these mitigation ratios.

Mitigation for indirect impacts to coastal California gnatcatcher and raptors (Impact BI-7, 8, 9 and 10) would include cessation of grading or construction activities if species nests are located within 300, 500 or 800 feet of a construction area (for coastal California gnatcatchers, tree-nesting and ground-nesting raptors, respectively) or within an area where noise levels would exceed 60 dB(A)  $L_{eq}$ . These bird species would be protected from disturbance associated with movement and noise from construction activities during the breeding season due to the required buffers between construction activities and active nests (a distance from the noise source determined by the wildlife agencies to adequately attenuate the disturbance). Because the daily activities of these species would not be disrupted, breeding and nesting activities would continue within proposed on-site open space, thus helping to ensure species survival, and mitigating the potential impact.

Table 2.2-1 ON-SITE VEGETATION COMMUNITIES/HABITATS	
Vegetation Community/Habitat*	Acre(s)
<b>High Sensitivity</b>	
Coast live oak woodland (71160)	1.0
<b>Moderate Sensitivity</b>	
Diegan coastal sage scrub (including disturbed; 32500)	91.73**
Coastal sage-chaparral scrub (37G00)	2.8
Coyote brush scrub (32000)	0.3
<b>Low Sensitivity</b>	
Non-native grassland (42200)	13.5
<b>Other</b>	
Eucalyptus woodland (11100)	0.2
Non-native vegetation (11000)	2.0
Disturbed habitat (11300)	4.13.7
Orchard (181000)	0.1
Developed land (12000)	0.2
<b>TOTAL</b>	<b>115.5</b>

Source: HELIX 2009

\* Vegetation categories and numeric codes are from Holland (1986).

\*\* These 91.7 acres of Diegan coastal sage scrub include 0.4 acre that was previously impacted by an abutting neighbor during brush clearing activities.

Table 2.2-2 LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR		
Species	Status*	Potential to Occur
San Diego ambrosia ( <i>Ambrosia pumila</i> )	FE/-- CNPS List 1B.1 R-E-D 3-3-2 County List A	Very low. Range extends from Riverside County through San Diego County into Baja. Found along drainages and areas adjacent to riparian areas. Nearest location is San Luis Rey.
San Diego thornmint ( <i>Acanthomintha ilicifolia</i> )	FT/SE CNPS List 1B.1 R-E-D 2-3-2 County List A	Low. Clay soils necessary for this species to occur do not occur on site. Would have been observed in 2003 survey if present.
Orcutt's brodiaea ( <i>Brodiaea orcuttii</i> )	--/-- CNPS List 1B.1 R-E-D 1-3-2 County List A	Low. Found in moist grasslands or near vernal pools during spring. Little suitable habitat occurs on site.
Summer holly ( <i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> )	--/-- CNPS List 1B.2 R-E-D 2-2-2 County List A	Low. Large shrub found in chaparral, foothill and coastal areas. Range extends from San Diego County to northern Baja below 2,100 feet. Would have been observed if present.
Wart-stemmed ceanothus ( <i>Ceanothus verrucosus</i> )	--/-- CNPS List 2.2 R-E-D 1-2-1 County List B	Low. Shrub species that would have been observed if present. Limited to San Diego and Baja. Prefers chaparral on dry hills and mesas in coastal areas.
Palmer's goldenbush ( <i>Ericameria palmeri</i> var. <i>palmeri</i> )	--/-- CNPS List 2.2 R-E-D 2-2-1 County List B	Low. Range extends from southern San Diego County to northern Baja. Typically found along drainages or near chaparral. Site is outside known range.
Western dichondra ( <i>Dichondra occidentalis</i> )	--/-- CNPS List 4.2 R-E-D 1-2-1 County List D	Low. Found in understory of chaparral, other shaded areas below 1,800 feet and rock outcroppings, often after fire. Little suitable habitat is present on site.
Graceful tarplant ( <i>Holocarpha virgata elongata</i> )	--/-- CNPS List 4.2 R-E-D 1-2-3 County List D	Low. Found in open areas, coastal, and foothill grasslands in San Diego, Riverside, and Orange counties. Locally, range is to south and east.
Robinson's pepper-grass ( <i>Lepidium virginicum</i> var. <i>robinsonii</i> )	--/-- CNPS List 1B.2 R-E-D Code 3-2-2 County List A	Very low. Widespread throughout southern California foothill in dry, exposed locales. Site is coastal in comparison.
California adolphia ( <i>Adolphia californica</i> )	--/-- CNPS List 2.1 R-E-D 1-2-1 County List B	Low. Shrub found on dry slopes, foothill, and coastal areas. Would have been observed if present.

<b>Table 2.2-2 (cont.) LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR</b>		
<b>Species</b>	<b>Status*</b>	<b>Potential to Occur</b>
Southwestern spiny rush ( <i>Juncus acutus leopoldii</i> )	--/-- CNPS List 4.2 R-E-D 1-2-1 County List D	Low. Ranges extend from Arizona to Baja and the central California coast. Found in moist, saline, or alkaline areas within coastal, foothill, and desert. Would have been observed if present.
Prostrate spineflower ( <i>Chorizanthe procumbens</i> )	--/-- CNPS List 4 R-E-D 1-2-2 County List D	Low. Prefers sandy openings in coastal scrub and chaparral habitat, as well as along edges of dirt roads. Habitats on site generally too dense. Would have been observed in openings in present.
Paniculate tarplant ( <i>Deinandra paniculata</i> )	--/-- CNPS List 4.2 R-E-D 1-2-2 County List D	Low. Found on sparsely vegetated slopes and grasslands or open sage scrub on hard-packed soils or on mesas in south coastal areas. Habitat generally too dense on site.
Cooper's rein orchid ( <i>Piperia cooperi</i> )	--/-- CNPS List 4.2 R-E-D 1-2-2 County List D	Low. Range extends from south coast, to Santa Catalina Island, San Gabriel Mountains, Peninsular Ranges, and Baja. Prefers generally dry sites, shrubland, woodland, and grasslands. Would have been observed if present.

Source: HELIX 2009

\*Refer to Appendix E of EIR Appendix D for a listing and explanation of status codes for plant and animal species.

Table 2.2-3 LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR		
Species	Status*	Potential to Occur
<b>INVERTEBRATES</b>		
Hermes copper butterfly ( <i>Lycaena hermes</i> )	--/-- County Group 1	Very low. Host plant <i>Rhamnus crocea</i> not found on site.
Monarch butterfly ( <i>Danaus plexippus</i> )	--/-- County Group 2	High. Migratory species likely passes through the site.
<b>VERTEBRATES</b>		
<b>Amphibians</b>		
Arroyo toad ( <i>Bufo microscaphus californicus</i> )	FE/CSC County Group 1	Low. Generally occurs in areas with open sandbars along perennial creeks or watercourses. This habitat does not occur on site. Nearest known sites are in Boden Canyon, and the San Luis Rey River to the north and northeast.
California red-legged frog ( <i>Rana aurora draytoni</i> )	FT/--	None. Riparian area on site limited. Needs standing water. Species believed extirpated from San Diego County.
<b>Fish</b>		
Arroyo chub ( <i>Gila orcutti</i> )	--/CSC County Group 1 U.S. Forest Service Sensitive	None. Creeks are ephemeral and do not hold water for long enough period of time.
<b>Reptiles</b>		
Orange-throated whiptail ( <i>Cnemidophorus hyperythrus beldingi</i> )	--/CSC County Group 2 MSCP	Moderate. Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant invertebrate prey base, particularly termites ( <i>Reticulitermes</i> sp.). May be present but in low numbers. None were observed during multiple surveys but likely occurs near more open areas.
San Diego horned lizard ( <i>Phrynosoma coronatum blainvillei</i> )	--/CSC County Group 2 MSCP	Moderate. Southern California west of the deserts and south into northern Baja. Coastal sage scrub, chaparral, both open oak woodlands and coniferous forests. Important habitat components include basking sites, adequate scrub cover, areas of loose soil, and abundance of harvester ants ( <i>Pogonomyrmex</i> spp.), a primary prey item.
Silvery legless lizard ( <i>Anniella nigra argentea</i> )	--/CSC County Group 2	High. Important habitat components include loose soil and leaf-litter, adequate soil moisture, warmth, and an abundance of invertebrate prey. Suitable habitat occurs in oak woodlands.

Table 2.2-3 (cont.) LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR		
Species	Status*	Potential to Occur
VERTEBRATES (cont.)		
Reptiles (cont.)		
Red-diamond rattlesnake ( <i>Crotalus ruber</i> )	--/CSC County Group 2	High. Found in chaparral, coastal sage scrub, along creek banks, and in rock outcrops or piles of debris with a supply of burrowing rodents for prey.
Coronado skink ( <i>Eumeces skiltonianus interparietalis</i> )	--/CSC County Group 2	High. Found in open areas, sparse brush, and oak woodlands, usually under rocks, leaf litter, logs, debris, or in the shallow burrows it digs (Zeiner et al. 1988).
Coast patch-nosed snake ( <i>Salvadora hexalepis virgultea</i> )	--/CSC County Group 2	High. Found in coastal sage scrub, chaparral, riparian, grasslands, and agricultural fields (Zeiner et al. 1988). Prefers open habitats with friable or sandy soils, burrowing rodents for food, and enough cover to escape being preyed upon.
Two-striped garter snake ( <i>Thamnophis hammondi</i> )	--/CSC County Group 1	Low. Found primarily along permanent creeks and streams but also around vernal pools and along intermittent streams. Occasionally found in chaparral or other habitats relatively far from permanent water.
San Diego banded gecko ( <i>Coleonyx variegatus abbotti</i> )	/-- County Group 1	Low. Found in chaparral and coastal sage scrub in areas with rock outcrops.
Coastal rosy boa ( <i>Charina trivirgata roseofusca</i> )	--/-- County Group 2	Moderate. Found in dry, rocky brushlands and arid habitats, usually near intermittent streams but does not require permanent water.
South coast garter snake ( <i>Thamnophis sirtalis</i> )	--/CSC County Group 2	Moderate. Subspecies of garter snake found in Southern California. Requires water/riparian areas near grasslands, coastal sage scrub, or chaparral. Site may be too dry to support this species.
San Diego ringneck snake ( <i>Diadophis punctatus similis</i> )	--/-- County Group 2 U.S. Forest Service Sensitive	Moderate. Generally occurs in moist habitats such as oak woodlands and canyon bottoms, but is also sometimes encountered in grassland, chaparral, and coastal sage scrub.
Coastal western whiptail ( <i>Cnemidophorus tigris multiscutatus</i> )	No official status, but formerly federal Category 2; County Group 2	High. Ventura County south, in cismontane California, to south-central Baja. Open coastal sage scrub, chaparral, and woodlands. Frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open sunny areas, shrub cover with accumulated leaf litter, and an abundance of invertebrate prey, particularly termites.

**Table 2.2-3 (cont.)**  
**LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**

Species	Status*	Potential to Occur
<b>VERTEBRATES (cont.)</b>		
<b>Birds</b>		
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	FE/SE County Group 1 MSCP	None. No suitable habitat on site. Breeds within thickets of willows or other riparian understory, usually along streams, ponds or lakes, or in canyon drainage bottoms. Migrant southwestern willow flycatchers may be located among any of the larger trees or shrubs in the County, but even migrants seem to prefer damp areas. Significant populations in County found only on Santa Margarita and San Luis Rey Rivers. Other County sightings have been at lakes and reservoirs and in the Tijuana River Valley.
Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	FE/SE County Group 1 MSCP	None. No suitable habitat on site. Prefers riparian woodland and is most frequent in areas that combine an understory of dense, young willows ( <i>Salix</i> spp.) or mule fat ( <i>Baccharis salicifolia</i> ) with a canopy of tall willows. Formerly common and widespread in California and northwestern Baja but now restricted to major river systems in San Diego County. Known to winter only in southern Baja.
Burrowing owl ( <i>Athene cunicularia hypugea</i> )	--/CSC County Group 1 MBTA	Low. This bird is restricted to essentially flat, open country with suitable nest sites. They acquire their burrows from various burrowing mammals either through abandonment or eviction. Evidence of this species or direct observation would have occurred if present.
Southern California rufous-crowned sparrow ( <i>Aimophila ruficeps canescens</i> )	--/CSC County Group 1 MSCP	Moderate. Found in coastal sage scrub, where it occurs on rocky hillsides and in canyons, may also be found in open sage scrub/grassy areas of successional growth (e.g., after a fire). Found from Ventura County to northwest Baja.
Bell's sage sparrow ( <i>Amphispiza belli belli</i> )	--/CSC County Group 1	Moderate. Occurs in sunny, dry stands of coastal sage scrub and chaparral.
Loggerhead shrike ( <i>Lanius ludovicianus</i> )	--/CSC County Group 1	Moderate. Found in open habitats including grasslands, shrublands, and ruderal vegetation with adequate perching locations. Some suitable habitat on site.
Yellow-billed cuckoo ( <i>Coccyzus americanus occidentalis</i> )	--/SE County Group 1	None. Now considered extirpated from San Diego County. Used to be found in open woodlands with dense understories, riparian woodlands, dense thickets, and occasionally parks. Common in eastern and Midwestern U.S., but rare in the west.

Table 2.2-3 (cont.) LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR		
Species	Status*	Potential to Occur
VERTEBRATES (cont.)		
Birds (cont.)		
Golden eagle ( <i>Aquila chrysaetos</i> )	--/CSC County Group 1 MSCP BEPA	Low. Forages in grassy and open, shrubby habitats. Nest most often on cliffs, less often in trees. Tend to require places of solitude and are usually found at a distance from human habitation.
Cooper's hawk ( <i>Accipiter cooperii</i> )	Nesting --/CSC County Group 1	Moderate. Occurs throughout the continental U.S. excluding Alaska, parts of Montana, and parts of the Dakotas. Winters south to Mexico and Honduras. In San Diego County, tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as shrublands or fields. May occur in woodlands on eastern edge of site.
Sharp-shinned hawk ( <i>Accipiter striatus</i> )	--/CSC County Group 1	Low. Would only occur during winter as a visitor.
Coastal cactus wren ( <i>Campylorhynchus brunnicapillus couesi</i> )	--/CSC County Group 1	Low. Occurs in coastal sage scrub with large cacti for nesting. While patches of cactus occur in the northern portion of the site, no cactus wrens were observed during gnatcatcher surveys, and no records of cactus wrens within the San Marcos quadrangle are reported on the CNDDDB.
Northern harrier ( <i>Circus cyaneus</i> )	--/CSC County Group 1	Moderate. Suitable habitat includes coastal, salt, and freshwater marshlands, grasslands, prairie, sage scrub, and chaparral.
California horned lark ( <i>Eremophila alpestris actia</i> )	--/CSC County Group 2	Low. Occurs in open habitats such as the grasslands and open areas found on site, but would likely have been observed if present.
Yellow-breasted chat ( <i>Icteria virens</i> )	--/CSC County Group 1	Low. Prefers brushy tangles, briars, stream thickets, riparian scrub, and riparian woodland. Breeding confined to riparian woodlands.
Grasshopper sparrow ( <i>Ammodramus savannarum</i> )	--/-- County Group 1	Low. Found from southern Canada to the southern U.S., West Indies, Mexico, and Ecuador. Locally found in grassland habitat that has not been plowed and contains some native grass components. Habitat limited on site.
Long eared owl ( <i>Asio otus</i> )	Nesting --/CSC County Group 1	Low. Year round resident in woodlands and forests. Suitable habitat limited on site. May forage on site if suitable roosting habitat is nearby.
Common barn owl ( <i>Tyto alba</i> )	--/-- County Group 2	High. Occupies a vast range of habitats from rural to urban, but nearby open grassland is essential for hunting.
Great blue heron ( <i>Ardea herodias</i> )	--/-- State Forestry Sensitive County Group 2	Low. Year-round resident hunts while wading in quiet waters. No suitable hunting habitat occurs on site.



<p><b>Table 2.2-3 (cont.)</b> <b>LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR</b></p>		
Species	Status*	Potential to Occur
<b>VERTEBRATES (cont.)</b>		
<b>Mammals</b>		
Stephens' kangaroo rat ( <i>Dipodomys stephensi</i> )	FE/ST County Group 1	Low. Prefers large areas of disturbed or patchy grasslands, open coastal sage scrub. Sites are outside known range in San Diego County. Nearest known populations are in Rancho Guejito and at the Naval Weapons Station in Fallbrook.
Pallid bat ( <i>Antrozous pallidus pacificus</i> )	--/CSC County Group 2	Low to roost on site. Roosts colonially in caves, mines, crevices, and abandoned buildings that do not occur on site but could forage in the area, as there are roost sites in the vicinity.
Northwestern San Diego pocket mouse ( <i>Chaetodipus fallax fallax</i> )	--/CSC County Group 2	Moderate. Occurs in open areas of coastal sage scrub and weedy growth, often on sandy substrates.
San Diego black-tailed jackrabbit ( <i>Lepus californicus bennettii</i> )	--/CSC County Group 2	Low. Occurs primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present. Most habitat on site is not suitable.
California leaf-nosed bat ( <i>Macrotus californicus</i> )	--/CSC County Group 2	Low to roost on site. Preferred roosts include caves or abandoned mines. This species is not likely to roost on site because of the lack of deep caves or mines but could forage if there is a roost in the vicinity.
San Diego desert woodrat ( <i>Neotoma lepida intermedia</i> )	--/CSC County Group 2	Moderate. Positive identification would require trapping. Generally found in chamise chaparral, oak woodland, and coastal sage scrub below 3,000 feet.
Southern grasshopper mouse ( <i>Onychomys torridus ramona</i> )	--/CSC County Group 2	Moderate. Can occur in all arid habitats, including coastal sage scrub and chaparral.
Townsend's western big-eared bat ( <i>Plecotus townsendii</i> )	--/CSC County Group 2	Low to roost on site. Roosts in mines or caves that do not occur on site but could forage in the area, especially in more mesic habitats such as the coast live oak woodlands.
Greater western mastiff bat ( <i>Eumops perotis californicus</i> )	-/CSC County Group 2	Moderate to forage on site. The species inhabits crevices in cliff faces, high buildings, trees, and tunnels. Foraging is concentrated around bodies of water but also includes coastal sage scrub, chaparral, and grassland habitats.
Small-footed myotis ( <i>Myotis ciliolabrum</i> )	--/-- County Group 2	Low to roost on site. Ranges throughout western North America. Roosts in various crevices, tunnels, and under rock slabs.

Table 2.2-3 (cont.) LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR		
Species	Status*	Potential to Occur
VERTEBRATES (cont.)		
Mammals (cont.)		
Pocketed free-tailed bat ( <i>Nyctinomops femorosaccus</i> )	--/CSC County Group 2	Low to roost on site. Ranges from southern California to New Mexico. Lives in deserts and sage scrub. Roosts in crevices.
Mexican long-tongued bat ( <i>Choeronycteris mexicana</i> )	--/CSC County Group 2	None. Likes desert canyons and mountain ranges. Roosts in crevices, mines and bridges.
Big free-tailed bat ( <i>Tadarida sapiens</i> )	--/CSC County Group 2	None. Isolated populations throughout southwestern U.S. Prefers forest and deserts. Roosts in crevices and cliffs. Site outside range.
Ringtail ( <i>Bassariscus astutus</i> )	--/Fully Protected County Group 2	Low. Found in various riparian habitats and in brush stands of moist forest and shrub habitats at low to middle elevations. Strictly nocturnal.
Mountain lion ( <i>Felis concolor</i> )	--/Fully Protected County Group 2	Low. Widespread species, locally ranges from Mountains into foothills, rarely to coastal areas. No sign of this species and no sign of mule deer, a preferred prey species, indicates the area is unlikely to be used regularly. Site likely too far west.
Southern mule deer ( <i>Odocoileus hemionus fuliginata</i> )	--/-- County Group 2	Moderate potential to occur. Southern Riverside County (Tahquitz Valley), south on the coastal slope to the vicinity of San Quintin, Baja. Coastal sage scrub, riparian and montane forests, chaparral, grasslands, croplands, and open areas if there is at least some scrub cover present. Crepuscular activity and movements are along routes that provide the greatest amount of protective cover.
American badger ( <i>Taxidea taxus</i> )	--/-- County Group 2	Low. Occurs in level, open areas in grasslands, agricultural fields, and open shrub habitats. It digs large burrows in dry, friable soils. Signs would have been observed if present.
Yuma myotis ( <i>Myotis yumanensis</i> )	--/-- County Group 2	Very low. Preferred roosts such as caves, abandoned mines, bridges, or tree cavities, which are not present on site. Always found near water.
Western red bat ( <i>Lasiurus blossevillii</i> )	County Group 2 U.S. Forest Service Sensitive	Low. Widespread from Canada to South America. Prefers forest and wooded areas, little of which is found on site.

Source: HELIX 2009

\*Refer to Appendix E of EIR Appendix D for a listing and explanation of status codes for plant and animal species.

**Table 2.2-4  
IMPACTS TO VEGETATION COMMUNITIES<sup>‡1</sup>**

VEGETATION COMMUNITY	EXISTING ON SITE	IMPACTS							Impact Neutral <sup>‡3</sup>
		On Site				Off Site	Oak Root Zone	Total	
		Grading	Brush Mgmt	Habitat Creation <sup>‡2</sup>	Subtotal				
<b>Wetlands</b>									
Southern coast live oak riparian forest	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
<b>High Sensitivity</b>									
Coast live oak woodland	1.0	0.1	0.0	0.0	0.1	0.1	0.4	0.6	0.5
<b>Moderate Sensitivity</b>									
Diegan coastal sage scrub (including disturbed)	91.7 <sup>‡4</sup>	21.7	<del>1.4</del> 1.8 <sup>5</sup>	0.0	<del>23.1</del> 23.5 <sup>5</sup>	0.2	--	<del>23.3</del> 23.7 <sup>5</sup>	0.5
Coastal sage-chaparral scrub	2.8	0.0	0.0	0.0	0.0	0.0	--	0.0	--
Coyote brush scrub	0.3	0.0	0.0	0.0	0.0	0.0	--	0.0	--
Sage Scrub Subtotal	94.4	21.7	<del>1.4</del> 1.8 <sup>5</sup>	0.0	<del>23.1</del> 23.5 <sup>5</sup>	0.2	--	<del>23.3</del> 23.7 <sup>4</sup>	0.5
<b>Low Sensitivity</b>									
Non-native grassland	13.5	10.4	0.1	0.6	11.1 <sup>2,‡</sup>	0.0	--	11.1 <sup>2,‡</sup>	--
<b>Other</b>									
Eucalyptus woodland	0.2	0.1	0.0	0.0	0.1	0.0	--	0.1	--
Non-native vegetation	2.0	1.7	0.0	0.0	1.7	0.1	--	1.7 <sup>8</sup>	--
Disturbed habitat	<del>4.1</del> 3.7	2.4	<del>0.3</del> 0.0	0.3	<del>3.0</del> 2.7 <sup>2,4,5,‡</sup>	0.0	--	<del>3.0</del> 2.7 <sup>2,4,5,‡</sup>	<del>0.2</del> 0.3
Orchard	0.1	0.0	0.0	0.0	0.0	0.0	--	0.0	--
Developed land	0.2	0.1	0.1	0.0	0.2	0.6	--	0.8	--
TOTAL	115.5	36.5	<del>1.9</del> 2.0 <sup>5</sup>	0.9	<del>39.4</del> 39.5 <sup>2,5</sup>	1.0	0.4	40.8 <sup>75</sup>	1.21.3

Source: HELIX 2009

<sup>‡1</sup> All areas are presented in acre(s); wetlands are rounded to the nearest 0.01 acre; uplands are rounded to the nearest 0.1 acre.

<sup>‡2</sup> 0.6 acre of non-native grassland and 0.3 acre of disturbed habitat would be impacted by coast live oak woodland creation.

<sup>‡3</sup> Includes ~~0.7~~ 0.8 acre of avoidance open space in the western panhandle and 0.5 acre within existing or proposed easements.

<sup>‡4</sup> These 91.7 acres of Diegan coastal sage scrub include 0.4 acre that was previously impacted by an abutting neighbor during brush clearing activities.

<sup>5</sup> Impacts include 0.3 acre of coastal sage scrub previously impacted by brush clearing activities by the abutting property owner that is within the proposed fuel modification zone and 0.1 acre that was previously impacted by the abutting neighbor but that is outside of the proposed fuel modification zone (i.e., an area for which ultimate regeneration is assumed). The Applicant has agreed to mitigate for this total of 0.4 acre of impacts.

Table 2.2-5 CUMULATIVE BIOLOGICAL RESOURCES IMPACTS (acres)																
Map Reference No.	Project Name	Project Number	Jurisdiction	Coast Live Oak Woodland		Diegan Coastal Sage Scrub		Non-native Grassland		Non-wetland WUS/State		Coastal California Gnatcatcher		Raptors		No Biological Impact Specified
				Impact	Mitigation	Impact	Mitigation	Impact	Mitigation	Impact	Mitigation	Impact	Mitigation	Impact	Mitigation	
11	Cal-a-Vie	P82-072 WM	County of San Diego	--	--	--	--	1.4	--	--	--	--	--	--	--	
12	Tran Tentative Parcel Map	TPM 20835	County of San Diego	--	--	--	--	14.76	7.38	--	--	--	--	--	--	
22	National Quarries	--	County of San Diego	--	--	--	--	--	--	--	--	--	--	--	--	✓ <sup>1</sup>
33	Grandview Road Subdivision	--	City of Vista	--	--	--	--	6.48	3.24	--	--	--	--	--	--	
34	Twin Oaks Valley Water Treatment Plant	--	Vallecitos Water District	--	--	4.4	4.4	--	--	75 sf	--	--	--	--	--	
35	Merriam Mountains	GPA 04-06	County of San Diego	27.3	54.6	2.4	7.2	20.7	10.4	PS	--	PS	--	NS	OS	
40	Rancho Minerva	--	Vista Unified School District	PS	PS	--	--	--	--	--	--	--	--	PS	--	
41	San Clemente TSM	--	City of Vista	--	--	--	--	--	--	--	--	--	--	--	--	✓ <sup>2</sup>
51	Monte Vista Drive Subdivision	--	City of Vista	--	--	0.19	0.38	1.36	5.44	--	--	--	--	--	--	
52	Vista Irrigation Pipeline Access	--	Vista Irrigation District	--	--	--	--	--	--	--	--	--	--	--	--	✓ <sup>3</sup>
53	Plamondon TPM/Emma Estates	TPM 20469	County of San Diego	--	--	--	--	--	--	--	--	--	--	--	--	✓
54	Via Conca D'Oro Residential	TM 5132	County of San Diego	--	--	2.01	4.02	--	--	--	--	--	--	--	--	
55	Merriam West Ranch	TM 5283	County of San Diego	--	--	2.66	-- <sup>4</sup>	7.17	3.57	--	--	--	--	--	--	<sup>4</sup>
56	Twin Oaks Farm	AD 01-021	County of San Diego	PS	--	--	--	--	--	--	--	--	--	--	--	<sup>5</sup>
57	Rimsa TM	TM 20660	County of San Diego	--	--	--	--	--	--	--	--	--	--	--	--	✓
58	TERI	P02-019; LOG No. 02-08-046	County of San Diego	0.6	1.8	0.4	0.4	13.0	6.5	0	0	PS	OS	PS	OS	
59	Pizzuto	TPM 20846	County of San Diego	--	--	1.04	2.08	--	--	--	--	--	--	--	--	
65	Kawano Subdivision	TM 5401 RPL3, ER 04-08-036	County of San Diego	--	--	--	--	--	--	--	--	--	--	--	--	✓
66	DKST	TM 5308	County of San Diego	0.2	0.5	7.5	15	4.7	2.4	--	--	--	--	PS	OS	
67	Casa de Amparo Group Care Facility	P 03-004	County of San Diego	--	--	--	--	--	--	--	--	--	--	--	--	✓
68	Sycamore/Cox	TSM 430	City of San Marcos	--	--	--	--	--	--	--	--	--	--	--	--	✓
69	Walnut Grove Park	MF 1251; CUP 02-550	City of San Marcos	--	--	--	--	27	--	0.5	0.5	--	0	PS	--	
70	Discovery Valley Equestrian & Canine Center	Neg. Dec 03-676	City of San Marcos	--	--	--	--	Up to 23.56	NS	--	--	--	--	--	--	
72	San Marcos Highlands	TSM 408	City of San Marcos	--	--	76	141.7	--	--	0.44	0.44	PS	OS	--	--	<sup>6</sup>
73	Malone Street (aka Ivy Ranch)	TSM 412	City of San Marcos	--	--	10.96	--	--	--	--	--	PS	OS	--	--	
74	Del Roy Drive (aka Dove Glen)	TSM 398	City of San Marcos	--	--	3.69	3.69	--	--	0.1	--	--	--	--	--	

Table 2.2-5 (cont.) CUMULATIVE BIOLOGICAL RESOURCES IMPACTS (acres)																
Map Reference No.	Project Name	Project Number	Jurisdiction	Coast Live Oak Woodland		Diegan Coastal Sage Scrub		Non-native Grassland		Non-wetland WUS/State		Coastal California Gnatcatcher		Raptors		No Biological Impact Specified
				Impact	Mitigation	Impact	Mitigation	Impact	Mitigation	Impact	Mitigation	Impact	Mitigation	Impact	Mitigation	
75	Mulberry	TSM 414, CUP 03-593	City of San Marcos	--	--	--	--	Up to 22	NS	--	--	--	--	--	--	
76	Kachy	TSM 459	City of San Marcos	--	--	--	--	--	--	--	--	--	--	--	--	✓ <sup>7</sup>
77	Richland Estates	TPM 20481	County of San Diego	--	--	--	--	--	--	--	--	--	--	--	--	✓
78	Roger Estate	--	County of San Diego	--	--	--	--	--	--	--	--	--	--	--	--	✓
79	Orchard Hills GPA	TM 5533; GPA 07-006	County of San Diego	--	--	--	--	--	--	--	--	--	--	--	--	✓
87	Windy Way Residential	TSM 429	City of San Marcos	--	--	3.6	11.5	--	--	--	--	--	--	PS	--	
88	Mulberry/ Rose Ranch	TSM 428	City of San Marcos	--	--	--	--	46	--	--	--	--	--	PS	--	
89	Rose Ranch	TSM 401	City of San Marcos	--	--	--	--	--	--	--	--	--	--	--	--	✓
96	Mission Road	TSM 432	City of San Marcos	--	--	22.85	18.89	--	--	--	--	PS	OS	--	--	
97	Glendale	TSM 427, CUP 01-502, GV 01-53, MF 859	City of San Marcos	--	--	16.7	10.53	--	--	--	--	--	--	--	--	
98	Windy Way Industrial	SP 81-04	City of San Marcos	--	--	--	--	--	--	--	--	--	--	--	--	✓
99	Woodward/ Borden Condos	TSM 440	City of San Marcos	--	--	--	--	Up to 7	NS	--	--	--	--	PS	--	
100	Vineyard/ Shirley	TSM 434	City of San Marcos	--	--	--	--	--	--	--	--	--	--	--	--	✓
106	Liberty Drive	--	County of San Diego	--	--	--	--	--	--	--	--	--	--	--	--	✓
107	Liberty Lane	TSM 419, CUP 03-616	City of San Marcos	--	--	4.77	6.68	--	--	--	--	--	--	PS	OS	
108	Richmar Avenue Retail	SDP 02-0236	City of San Marcos	--	--	--	--	--	--	--	--	--	--	--	--	✓
109	Mission and Vineyard Retail Center	--	City of San Marcos	--	--	--	--	--	--	--	--	--	--	--	--	✓ <sup>8</sup>
110	Vineyard	TSM 413	City of San Marcos	--	--	4.5	--	--	--	--	--	PS	--	--	--	
115	Civic Center Plaza	MF 1554	City of San Marcos	--	--	--	--	--	--	--	--	--	--	--	--	✓ <sup>9</sup>
SUBTOTAL				28.10	56.90	163.67	226.47	195.13	38.93	1.04	0.94	--	--	--	--	
Proposed Project	Sugarbush	TM 5295RPL	County of San Diego	0.6	1.3	23.37	67.6	11.1	2.4	<0.01	0.00 <sup>10</sup>	PS	OS	PS	OS	
TOTAL				28.7	58.2	<del>186.97</del> 187.37	294.07	206.23	41.33	1.06	1.00	--	--	--	--	

-- = not available or no impact; NS= not significant; PS=potentially significant; OS=open space; sf=square feet  
1 No impacts were identified in the files; however, it was stated that use of a native hydroseed mixture would reduce biological impacts.  
2 This project is exempt from CEQA and no technical studies are on file.  
3 Vegetation likely will have to be removed for maintenance of existing pipelines; impacts have not yet been determined.  
4 A total of 86.74 acres will be preserved; however, it is not known how much of each impacted habitat.  
5 A total loss of 6.5 acres of non-native grassland, eucalyptus woodland, and urban/developed habitat would occur; however, it is not known how much of each habitat.  
6 Project has been denied.  
7 File at jurisdiction missing.  
8 This project is no longer proposed and no environmental document has been prepared.  
9 No environmental document available.  
10 Mitigation would occur with exotic plant removal

**Table 2.2-6  
MITIGATION FOR IMPACTS TO VEGETATION COMMUNITIES<sup>1</sup>**

Vegetation Community	Existing On Site	Total Impacts	Existing Easements	Mitigation		Biological Open Space	Avoidance Open Space <sup>3</sup>
				Ratio	Acreage		
Wetlands							
Southern coast live oak riparian forest	0.00	0.00 <sup>*2</sup>	0.00	NMR	--	0.00	0.00
High Sensitivity							
Coast live oak woodland	1.0	0.6	0.0	2.2:1	1.3	1.3 <sup>‡4</sup>	0.5
Moderate Sensitivity							
Diegan coastal sage scrub (including disturbed)	91.3 <sup>7</sup>	23.3 <sup>6</sup>	0.5	2:1	46.6 <sup>4</sup>	67.6 <sup>7</sup>	0.0
Coastal sage-chaparral scrub	2.8	0.0	0.0	--	--	2.8	0.0
Coyote brush scrub	0.3	0.0	0.0	--	--	0.3	0.0
Sage Scrub Subtotal	94.4 <sup>8</sup>	23.3 <sup>6</sup>	0.5	2:1	46.6 <sup>4</sup>	70.7 <sup>8</sup>	0.0
Low Sensitivity							
Non-native grassland	13.5	11.1 <sup>‡4</sup>	0.0	0.5:1	5.6	2.4 <sup>‡8</sup>	0.0
Other							
Eucalyptus woodland	0.2	0.1	0.0	NMR	--	0.1	0.0
Non-native vegetation	2.0	1.7 <sup>8</sup>	0.0	NMR	--	0.3	0.0
Disturbed habitat	4.1 <sup>3</sup>	3.0 <sup>‡4</sup>	0.0	NMR	--	0.8 <sup>‡4</sup>	0.2 <sup>3</sup>
Orchard	0.1	0.0	0.0	NMR	--	0.1	0.0
Developed land	0.2	0.8	0.0	NMR	--	0.0	0.0
TOTAL	115.5	40.7 <sup>6</sup>	0.5	--	53.5 <sup>4</sup>	75.7 <sup>6</sup>	0.70.8

Source: HELIX 2009

<sup>1</sup> All areas are presented in acre(s); wetlands are rounded to the nearest 0.01 acre; uplands are rounded to the nearest 0.1 acre; therefore, totals reflect rounding

<sup>\*\*2</sup> Installation of sewer pipeline would occur by jacking and boring to avoid impacts to southern coast live oak riparian forest. Water pipeline would be installed within roadbed.

<sup>‡3</sup> Habitat within the avoidance open space would be preserved on site within the western panhandle along Cleveland Trail, but would not be applied toward mitigation.

<sup>‡4</sup> Mitigation for oak impacts would include 0.4 acre of oak woodland preservation and 0.9 acre of oak woodland creation, which would impact 0.6 acre of non-native grassland and 0.3 acre of disturbed habitat.

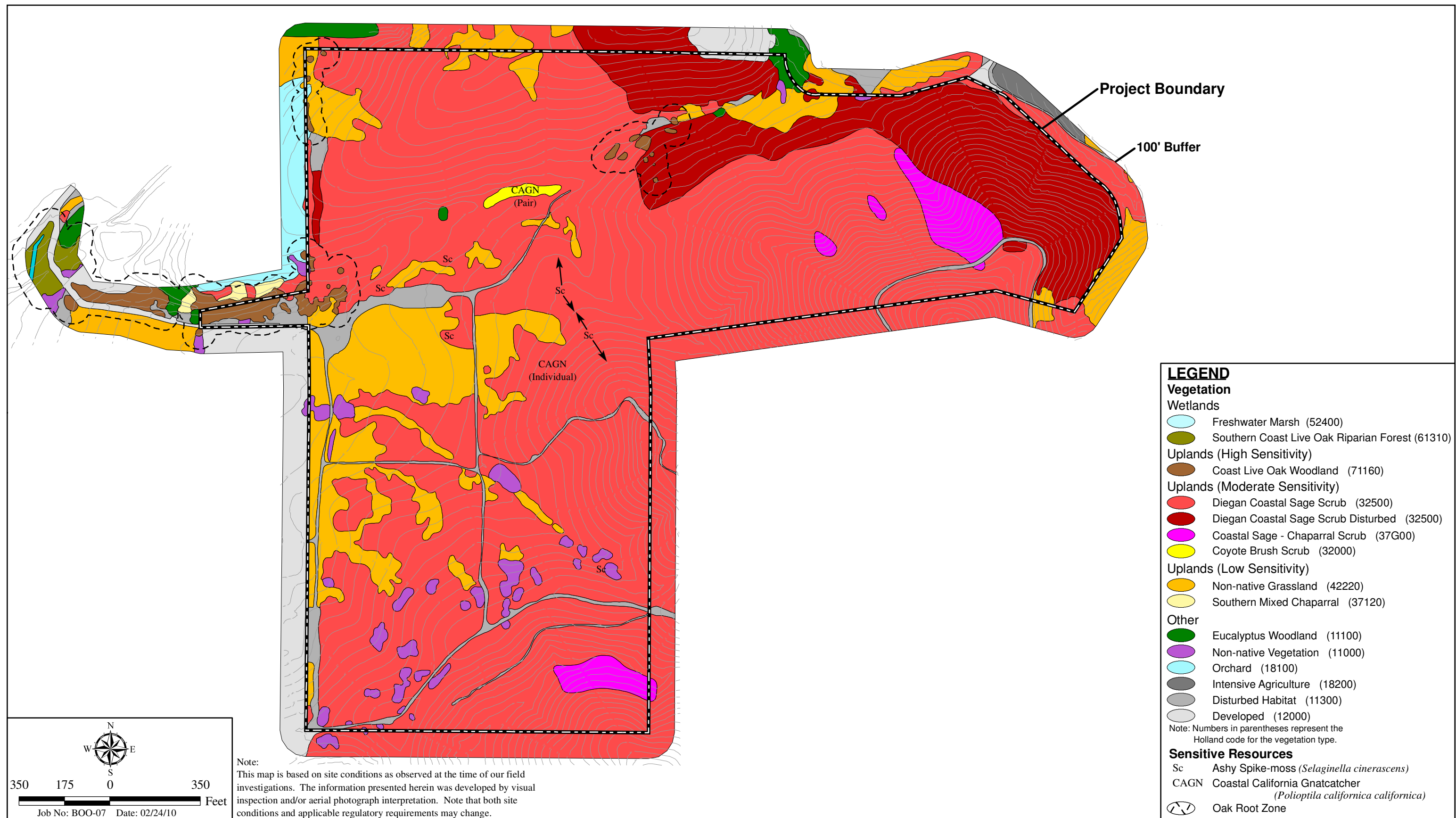
<sup>5</sup> These 91.7 acres of Diegan coastal sage scrub include 0.4 acre that was previously impacted by an abutting neighbor during brush clearing activities.

<sup>6</sup> Impacts include 0.3 acre of coastal sage scrub previously impacted by brush clearing activities by the abutting property owner that is within the proposed fuel modification zone and 0.1 acre that was previously impacted by the abutting neighbor but that is outside of the proposed fuel modification zone (i.e., an area for which ultimate regeneration is assumed). The Applicant has agreed to mitigate for this total of 0.4 acre of impacts.

<sup>‡7</sup> The remainder of non-native grassland mitigation would be met with preservation of excess sage scrub habitat.

NMR = No mitigation required by wildlife agencies or County for impacts to these habitats.

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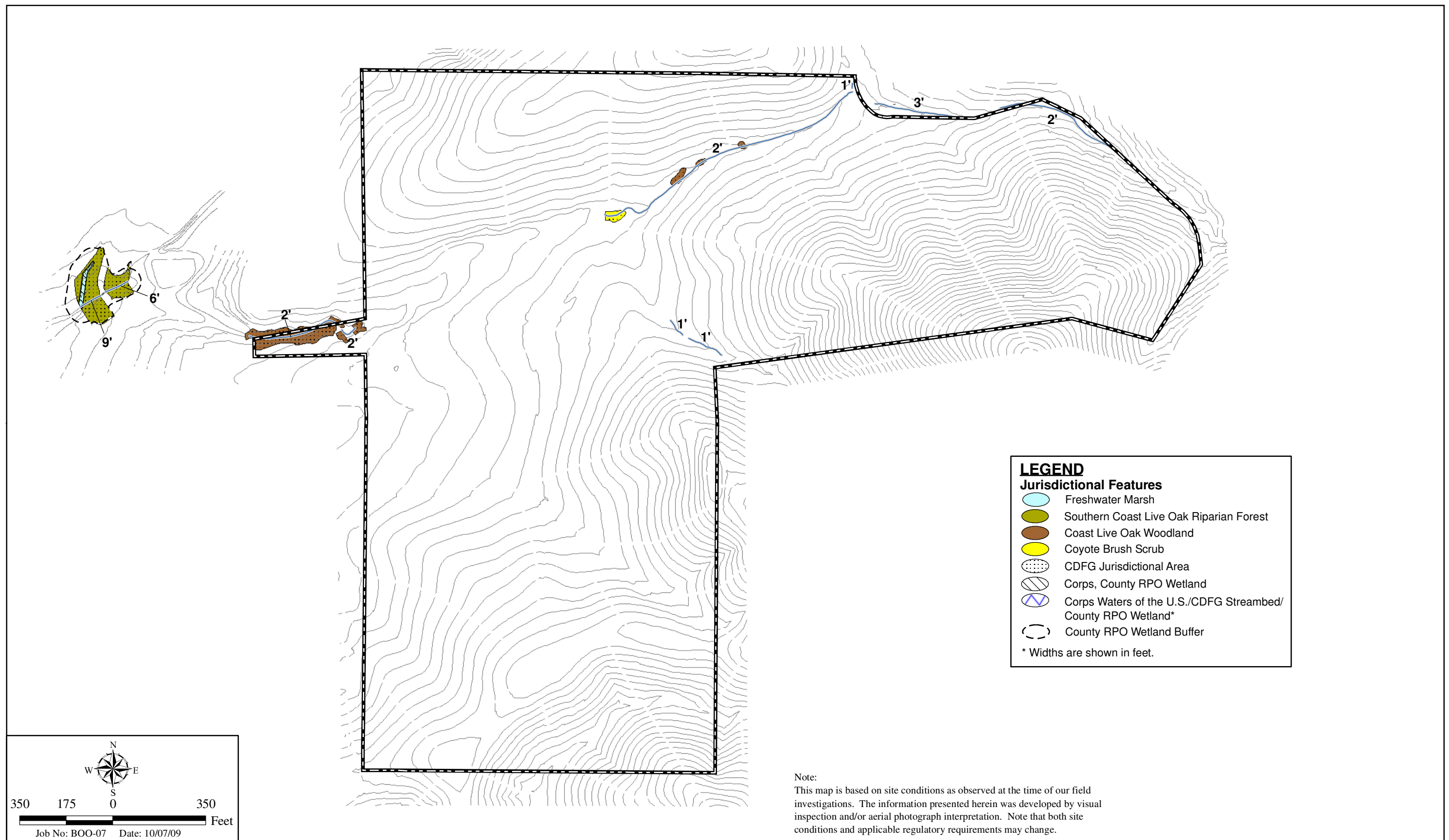


## Vegetation and Sensitive Resources

SUGARBUSH RESIDENTIAL PROJECT

Figure 2.2-1





## Jurisdictional Delineation

SUGARBUSH RESIDENTIAL PROJECT

Figure 2.2-2

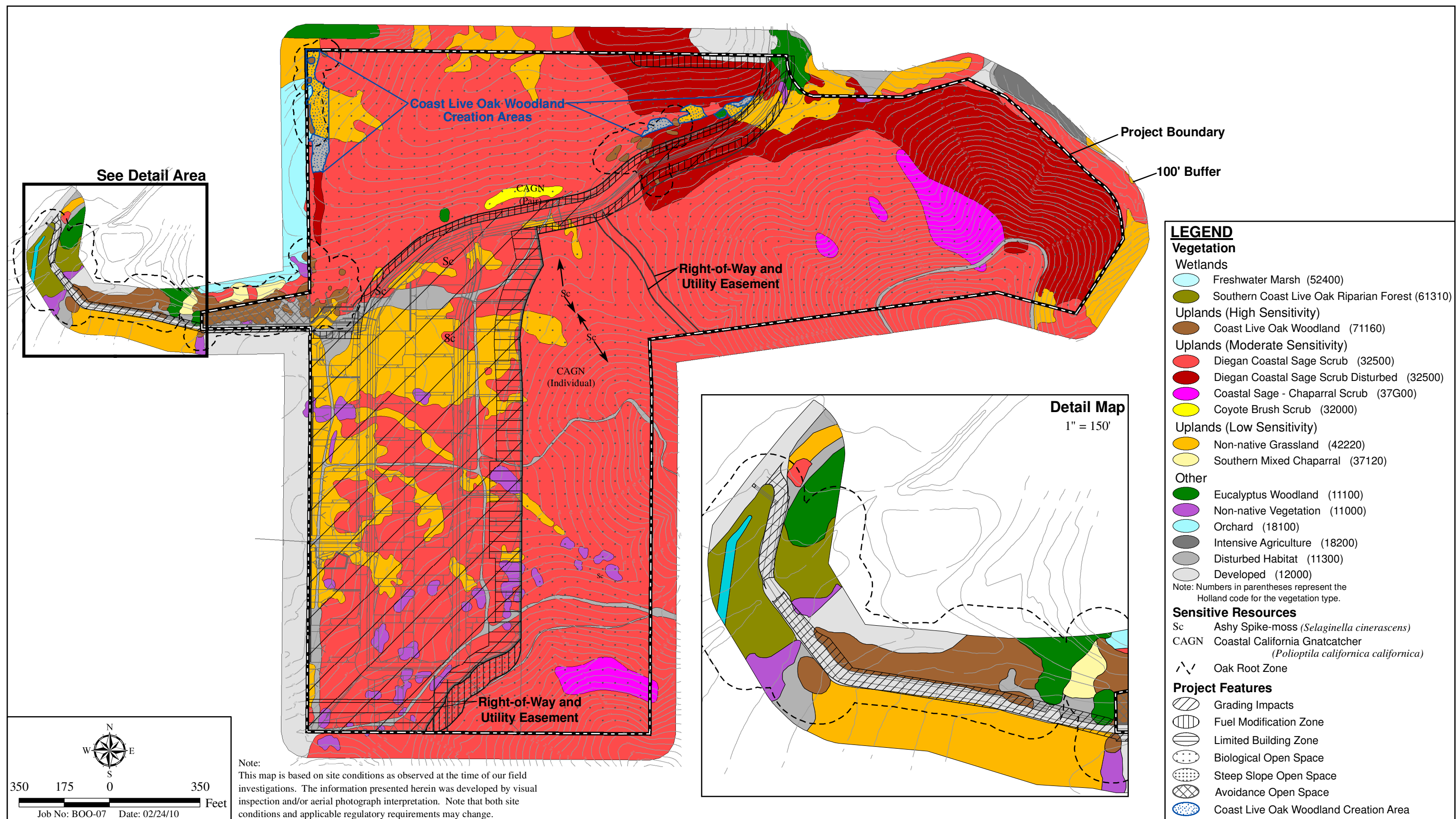


Buena Creek crossing looking southeast along Cleveland Trail



Buena Creek looking northeast at Cleveland Trail



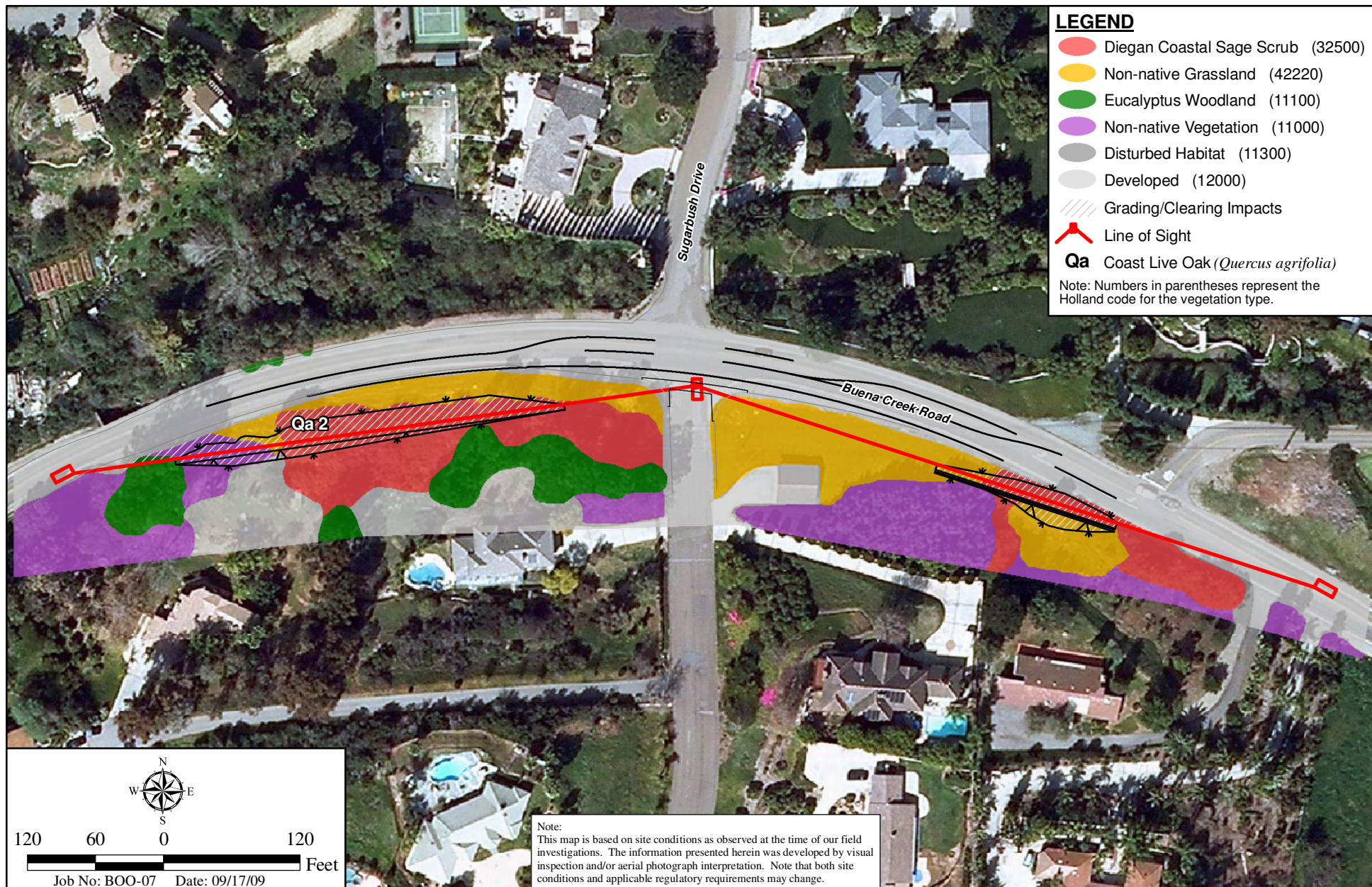


## Vegetation and Sensitive Resources/Impacts and Open Space

SUGARBUSH RESIDENTIAL PROJECT

Figure 2.2-4A



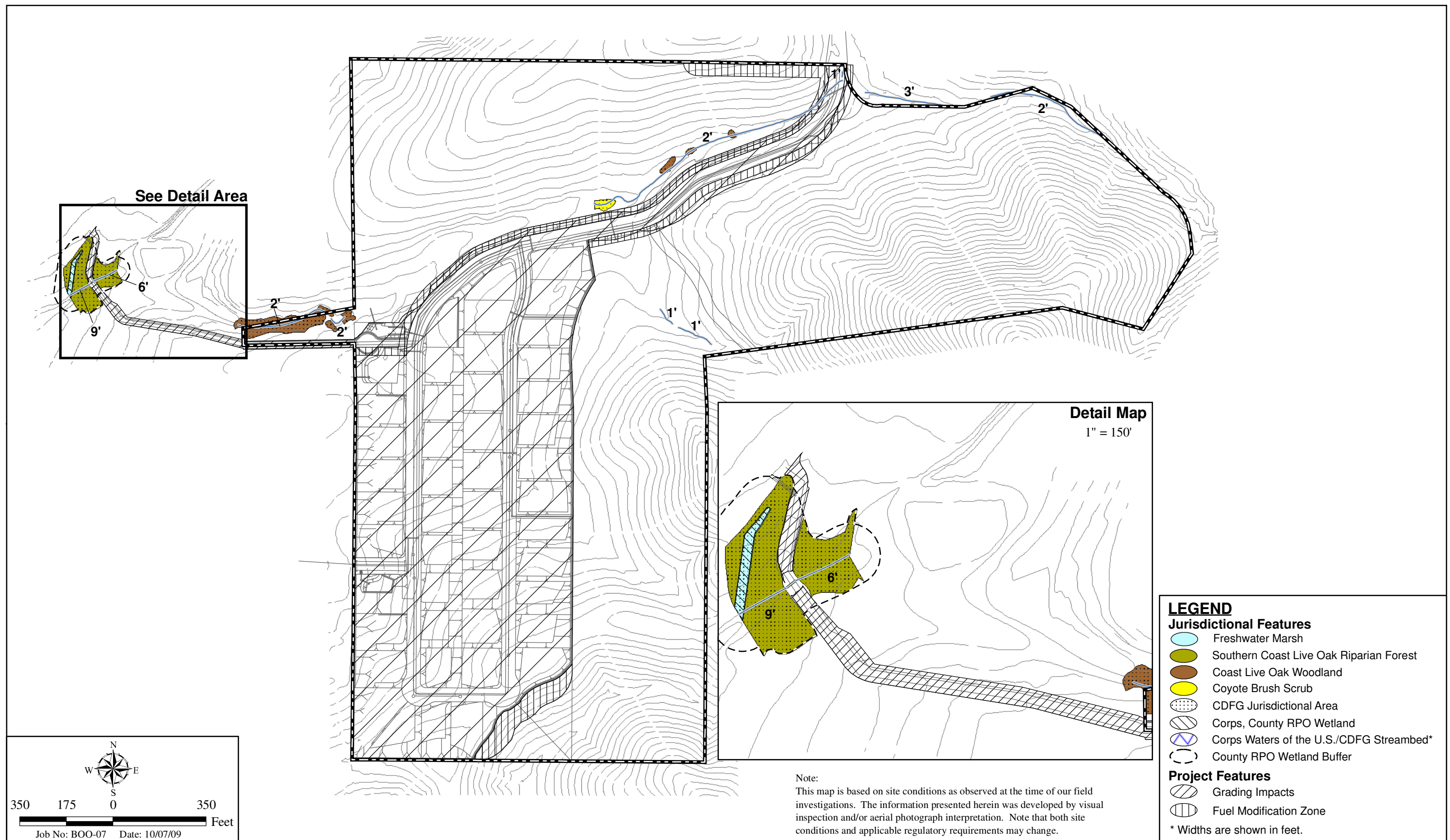


## Vegetation and Sensitive Resources/Impacts and Open Space

SUGARBUSH RESIDENTIAL PROJECT

Figure 2.2-4B



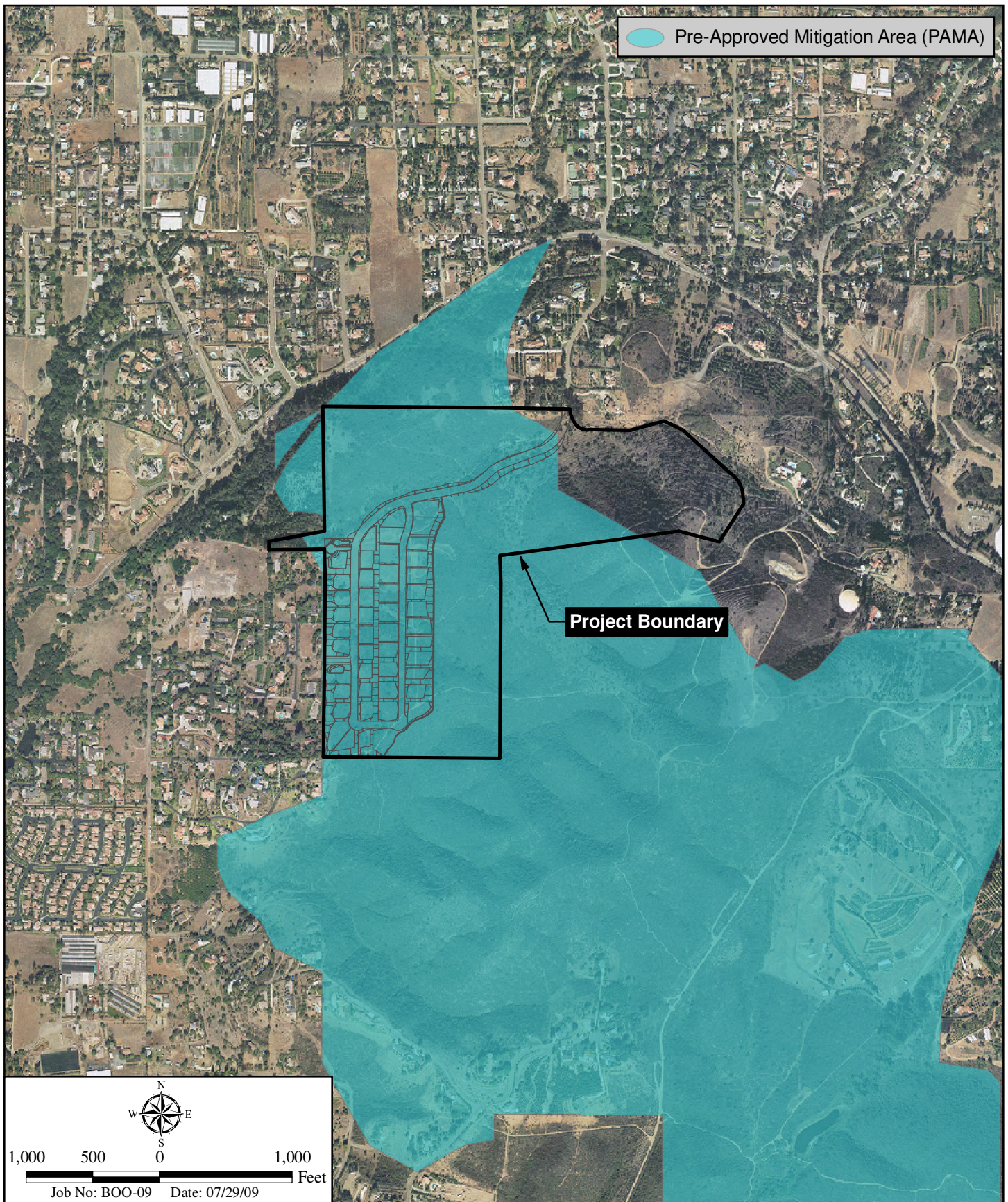


## Jurisdictional Delineation/Impacts

SUGARBUSH RESIDENTIAL PROJECT

Figure 2.2-5





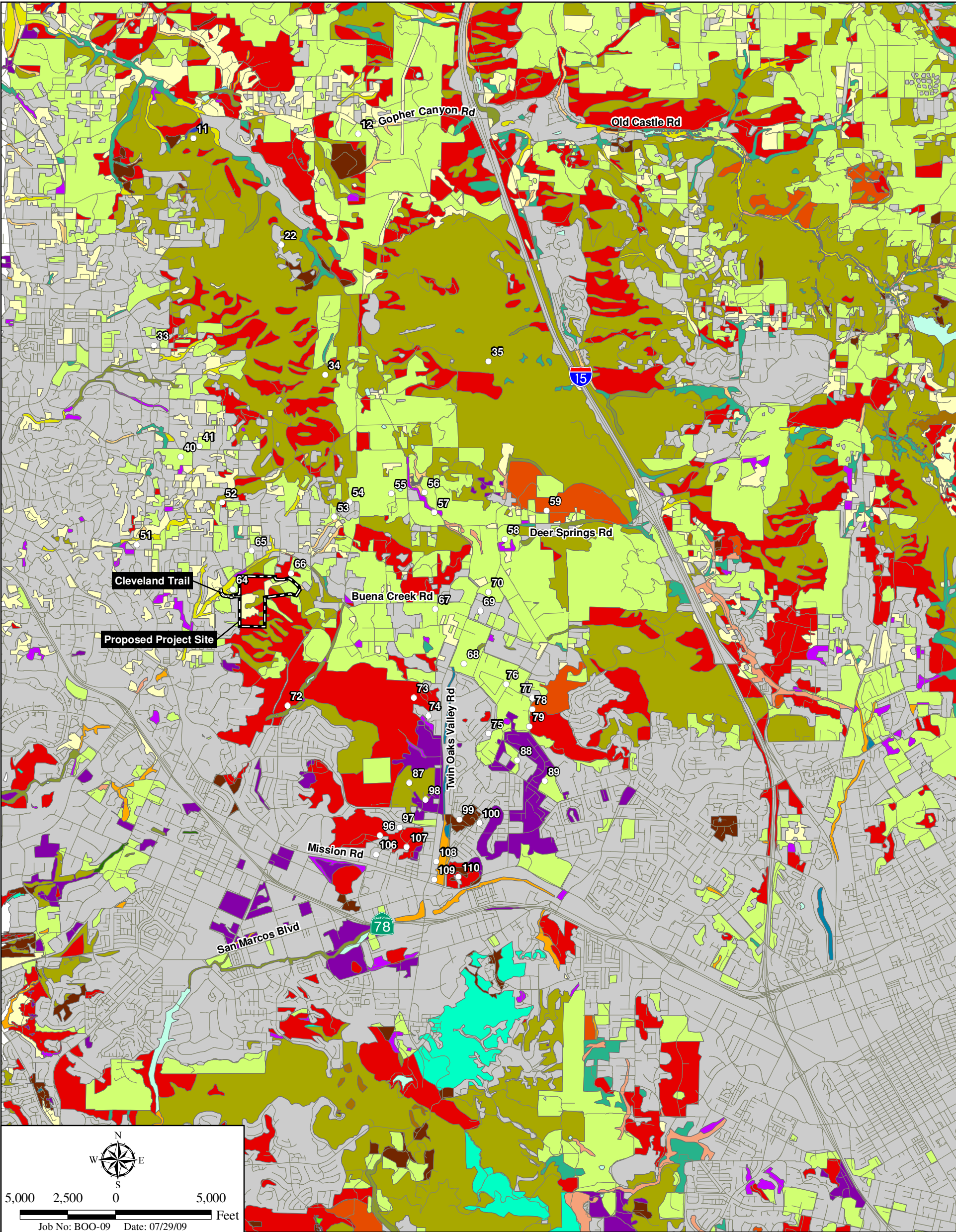
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## Proposed Pre-approved Mitigation Area

SUGARBUSH RESIDENTIAL PROJECT

Figure 2.2-6





LEGEND		
 Freshwater Marsh	 Disturbed Wetland	 Southern Mixed Chaparral
 Southern Willow Scrub	 Non-Vegetated Channel, Floodway, Lakeshore Fringe	 Chamise Chaparral
 Southern Riparian Scrub	 Coast Live Oak Woodland	 Chaparral
 Mule Fat Scrub	 Oak Woodland	 Non-Native Grassland
 Southern Riparian Forest	 Engelmann Oak Woodland	 Eucalyptus Woodland
 Southern Cottonwood-willow Riparian Forest	 Native Grassland	 Disturbed Habitat
 Southern Coast Live Oak Riparian Forest	 Diegan Coastal Sage Scrub	 Agriculture
 Southern Sycamore-alder Riparian Woodland	 Coastal Sage-Chaparral Scrub	 Urban/Developed
 Riparian Woodlands	 Scrub Oak Chaparral	

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Biological Cumulative Projects

SUGARBUSH RESIDENTIAL PROJECT

Figure 2.2-7